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FIFTH ANNUAL REPORT,

OF THE

Ohio. COMMISSIONER OF STATISTICS,

TO THE

GOVERNOR OF THE STATE OF OHIO:

FOR THE YEAR 1861.



COLUMBUS:
RICHARD NEVINS, STATE PRINTER.
1862.

FIFTH ANNUAL REPORT

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COMMISSIONER OF STATISTICS.

The Bureau of Statistics was established by the Act of April 17, 1857; enlarged, and made permanent, by the Act of April 12, 1858. In the four years since its establishment, I have made four Annual Reports—making, in all, an octavo volume of 549 pages, and embracing no less than 104 elaborate Tables. These Tables contain an account of every element in the progress of the State, and of its actual condition, whether Physical, Social, Moral, Industrial, or Educational. Taken in all its parts, we have in these Reports a more complete view of this State than can be had of any one in the Union, and more systematized, I believe, than in most of the States of Europe. In our country, no State has a regular Bureau of Statistics but the young State of Minnesota, which has recently created one by law. In several States—particularly in Massachusetts, New York, and Iowa—nearly all the most interesting statistics are gathered and published by different State officers, but are not united and classified. The very elaborate statistics of New York, under the State Census, were compiled under the direction of the Secretary of State, and are most elaborate and minute, but in some departments were very erroneous. Soon after this, the very intelligent gentleman, then Secretary, was thrown out by the revolution of parties, and the next work of this kind must be begun and carried on by a person entirely new to such pursuits. In Massachusetts, the annual return of Births, Deaths, and Marriages, with the semi-decennial census of industry, is published in well-prepared volumes, illustrating at once the great interest felt in the subject, and the value which the State places on such labors. The statistical reports of New York and Massachusetts have, however, important defects, which are obvious to persons engaged in such pursuits. They do not embrace half the subjects which should be embraced in a complete statistical view of a State; and they want unity, because they are not concentrated and prepared by one person, in one office. The same defect exists in Europe, except where individuals like Quetlet, McCullough and McGregor have remedied the evil by systematic works written on the subject of statistics. It is obviously the better plan to concentrate all classes of statistics, to be digested and the gen-

eral laws of movement deduced by one person, free from all other business, and thus present clear and systematic views of the State. Statistics are no longer regarded as a mere mass of figures, useless and uninteresting. They contain the highest philosophy, and the highest minds regard them as the elements from which alone can be deduced the philosophy of society. Historians and statesmen consult them in order to ascertain the basis of civilization and determine the wisdom of laws. In fact, statistics are rapidly assuming the form of science—that science which is, perhaps, the ultimate, the highest of all—Social Science.

In preparing my last report (for 1860) I availed myself of the small contingent fund at my disposal to compile from the manuscript volumes of the United States census for 1860 (deposited in the office of the Secretary of State) the returns of the industry, as well as population, of Ohio. This will be found fully tabled in that report. It will be observed that the United States Government *has not, to this day, published these returns*; so that my report furnished the only publication to the people of the statistics of the decennial census. I desired to compile from these returns some other tables of social statistics, but the means at my command were not sufficient. I may here say, what seems not to have been fully understood by the past Legislature, that it is very desirable to have a small sum at the command of the Commissioner, to obtain some classes of information which cannot be had from official persons, but must be procured from private individuals. Of this class, are meteorological tables, reports upon the state of agriculture previous to the return of the assessors, physical descriptions of men and women, in order to determine the medium or average men of Ohio, and medical reports on the type and mortality of diseases. Quite a small sum, compared with many common expenditures, would enable the Commissioner to procure a class of statistics in relation to the most important elements of the human condition which have not heretofore been obtained in any State.

Some years since an act was passed requiring the registry of births and deaths. One report was made, which proved so defective, that the law was suspended. The registry of births and deaths is, for police and legal purposes, of great value, and I have no doubt, by some amendments of the law, may be made effective. But, even if not effective for purposes of registry, the statistics of this class may be readily obtained. I shall hereafter suggest to the Legislature a plan for that purpose. I may here remark that in statistical inquiries much patience is required. It is not merely necessary to pass a law. There must be a *habit* of such investigation, which only time can give. It is many years since the States of Massachusetts, Connecticut and Rhode Island undertook to obtain the statistics of births and deaths. At first the attempt was as unsuccessful as it was in Ohio; but, after several years, the officers whose duty it was to make the returns became familiar with the mode of proceeding, and the vital statistics of these States are now as accurate probably as any in the world.

Some amendments of the law are required as to the mode of ascertaining the *number and character of violent deaths*. These should be determined exclusively by the coroners; but the law on that subject is totally defective. If the office be

vacant, or the coroner absent, or if he live more than ten miles from the body found, the inquest is to be taken by a justice of the peace. The consequence is, that numerous inquests are had by justices, and numerous cases of violent death occur without any inquest. There is no provision for a general record in the county of inquests or of violent deaths. The law should require a record in some central office (say the Court of Probate) of all inquests and of all known violent deaths, with a *specification of the cause and manner of death*. This is as necessary for police and moral considerations as for purposes of statistics. The office of coroner has heretofore been regarded, except in the largest towns, as unimportant; but it might and ought to serve valuable ends in regard to legal and medical science. At a period of the world when over-excitement has caused an increase of lunacy, suicide, and monstrous crimes, we should direct the eye of society more closely on the causes and remedies of these manifestations of social disease.

In regard to agricultural statistics, some amendments in the law may be made, by which a large class of additional facts can be had, without any material increase of expense. The agricultural statistics are procured by the assessors, and, while doing this, they may just as readily procure and note all the facts which are necessary to a complete view of the subject. The County Auditors now compile from the assessors' reports a full account of all the leading crops, animals, cheese, butter and coal. Several other articles ought to be reported: among these are tobacco, flax and sorghum. The last two articles are likely to become very important crops. Flax, both for linen and oil, must hereafter be more largely cultivated, in order to make us entirely independent. Sorghum is cultivated largely in this State, and the now successful manufacture of molasses will probably increase the crop. It is desirable that we should note carefully all the changes in our agriculture. Ohio is one of the most successful agricultural communities in the world, and from this branch of industry we derive the largest part of our wealth. The statistics of the State, now carefully prepared in this department, has already enabled us to determine the *averages* of all crops, and the changes, improvement or deterioration going on in different sections. These statistics, now recorded for a series of years, has already enabled us to determine some of the influences of seasons, varying in character, on the production of the grain crops. The knowledge of these influences, connected with the advancing science of meteorology, enables farmers to know certain effects, and thus to change their crops and cultivation with the changes of season. With these preliminary remarks, I proceed to the condensed result of statistical inquiries for the year 1861.

I. CLIMATOLOGY.

Serial observations on all the facts of climate have now become one of the most important branches of statistics. Till recently, nothing was deemed more uncertain than the change of the seasons. Great reliance was, indeed, placed by many

ignorant persons on the changes of the moon, and there have always been numbers of people who firmly believed that the proper time to plant, reap or kill was at certain periods of the moon. Admitting that there may be some truth in these observations, it has never been believed that any calculation of seasons and of climatic changes could be made beyond a very brief time. Notwithstanding the apparent inconstancy of seasons, there is now good reason to believe that even changes of climate depend on fixed laws, and that after certain long periods the same seasons return. If they do not, how can the equilibrium of nature be maintained? How else can seed time and harvest, moisture and dryness, fruits and vegetables return with such uniformity that there is always a supply sufficient for all animal life, and there is no deduction to any class of beings? In fact, we know there must be laws of climate, but the causes of climatic movements are so subtle, and the changes are so apparently fickle, that we have not observed them. Our ignorance arises from *the want of those serial and continuous observations* on climate, which we are now endeavoring to make. Already some important laws have been deduced from the observations of scientific observers during the last thirty or forty years. The Smithsonian Institution, under the care of Professor Henry, is now engaged in recording the reports of many observers, and will ultimately obtain many valuable results. Even in the five years since I commenced my reports, I have made some progress towards ascertaining the laws of climatology. To those who think nothing can be known of the coming seasons, I quote the following remark from my report of 1859 (page 20): "If we can draw any conclusions from the experience of the last ten years, we may fairly expect larger *aggregate* crops in 1860 and 1861 than we had for the past four years." This proved true. The *aggregate* crop of 1860 was the largest ever raised in Ohio, and the crop of 1861 is a fair one.

In my report for 1860, I remark: "Considering the constant effort which nature makes to return to her normal condition, and to remain there till some remote causes produce spasmodic changes, we may hope for a cycle of favorable years and good crops."

There is nothing in the year past to change that opinion. The climatic phenomena have not been very striking. The most remarkable were:

1st. The great comet, which was first visible in the southern part of the State, on the evening of the 30th of June. It has been many years since one so large and luminous appeared. It came unannounced by astronomers, and has not been identified with any one whose orbit has been observed. After presenting for several weeks one of the most beautiful appearances in the heavens, it rapidly disappeared. While there are not a few who attribute great changes to cometic influences, science has not been able to detect any direct effects upon the earth from those bodies. A theory has recently been stated which, if true, would make them the cause of no small changes in the equilibrium of climate. It is known that the stars are visible, through the "tail," or, more properly, the prolonged atmosphere of the comet. Hence this atmosphere is not only not solid, but it is nothing which we understand as vapor; for a cloud, and even a thin vapor, will ob-

soure the sun. Hence, it is theoretically concluded, that this tail, or comet atmosphere, is some form of electricity, since it is the only known element capable of exhibiting such phenomena. If this be so, it is also inferred that the office of the comet is to supply electricity; or, in other words, to maintain the equilibrium of electricity in the planetary system. This theory is no more fanciful than was that of gravitation, when nothing was known but conjecture. It is not in opposition to any established facts, and is no more poetic or hypothetical than the influences which mankind have for many ages attributed to the moon and planets. Some facts, we know, which prove electricity to be a powerful element in vegetable if not animal growth. Several years since, experiments were made in England upon electricity applied to garden plants, by machinery operating through wires. It was found that electricity was a stimulant to vegetable life, and that plants grew much more rapidly under its influence. Here, then, we have one link between this mysterious element and the movements of nature. If electricity so influence vegetation, its greater or less quantity in the atmosphere must have much to do with the laws of climate. These influences, however, are among the unrevealed mysteries of science. We know enough to know that they exist; enough to stimulate curiosity; and enough to make it probable that science has yet to achieve her greatest conquests. I mention the subject here in connection with the sudden appearance of comets, in order to illustrate the fact that, long and continuous observations on climatic phenomena are necessary to establish the laws of climate; and that, by such a series of observed facts, these laws may, and probably will, be ascertained.

It is ascertained most clearly, that *temperature* is by no means the only element to be regarded in the influences of climate on vegetation. As an illustration of this, I quote the following statement of Mr. Roswell Marsh, one of the oldest meteorological observers in the State. He says:

"The 20th of April the thermometer was at 28°, the morning clear and frosty. Everything in blossom, or which had passed beyond, with few exceptions, was killed. Grapes, although the young shoots were out two or three inches, were not touched in my grounds, while black mulberry leaves, and even the ends of branches, close by the grapes, were killed. Electricity has more to do with the discriminative action of frost than is admitted in our philosophy."

2. FROSTS.—Among the most unaccountable of meteorological phenomena is the recurrence of severe or biting frosts. On the morning of the 5th of June, 1859, there occurred one of the most remarkable frosts ever known. It killed half the wheat in this State, and destroyed nearly all the fruit. A full account of this will be found in my report for 1859. In this year (1861) a similar but far less destructive frost occurred, on the 2d of May. This frost did little or no damage to the wheat, but, in the greatest part of the State, the crops of peaches, apples and cherries, were almost entirely destroyed. The frosts in May, (as stated by Mr. Jacob Ihrig, of Wayne county,) were as follows, viz: On the 2d, hard; on the 17th, 18th, 22d, 23d, 29th, 30th and 31st, light. There were two more light frosts, one on the 27th of June, and the other on the 3d of July

but they were harmless. This frost was slight and unimportant in the extreme southwestern part of the State. Most of the peach orchards below the north line of Warren county bore good crops; but the fruit on the Ohio river, in Adams county, where it is usually remarkably good, was very inferior. This is a very good test of the power of the frosts.

In my report for 1859, I gave the notes of Mr. Jacob Ihrig, of Wayne county, on the recurrence of frosts, which, with that of this year, seems to indicate a periodical return of frosty seasons of greater or less length, generally lasting three years. Thus the five cycles given by him were—

First Period. The years 1815, 1816 and 1817. It is well known that the summer of 1816 was the coldest within the present century. There was frost in every month in the year. In 1817, on the morning of the first of June, everything, even the leaves of the forest, were frozen.

Second Period. 1824, May 20th and 26th, were hard frosts, doing little damage.

Third Period. In 1834, May 14th, another hard frost, and occurrences same as in 1817.

Fourth Period. In 1843, says Dr. Hildreth, (vide table), on the 3d of May, a frost killed the apples in Washington county when they were as big as ounce balls. In 1845, says Mr. Ihrig, May 11th, 12th, 16th, 24th, and 28th, there were frosts—those of the 12th and 28th hurting the corn.

Fifth Period. In 1859, June 5th, there was a destructive frost, and on the 2d of May, 1861, killing the fruit.

From this statement, it appears that *late and hard frosts* return in periods of eight or nine years, but they are not always equally destructive. Those of 1817, 1834 and 1859, were the severest. The destructiveness of a frost depends not merely upon its occurrence, but that it occurs just when the germs of grain or fruit are in a tender and forming state. The most destructive frosts have come between May 1st and June 10th.

From the knowledge we have already acquired on this subject, it is probable, if not certain, that a long continued series of observations would reduce even this most uncertain of climatic elements within the bounds of regular laws.

3. DROUTH—Many of my correspondents mention a severe drouth, which prevailed from the beginning of May till the middle of August. In Wayne county, there were *eleven weeks* without rain; and the hay crop was, in consequence, reduced one-half. This drouth seemed to have been felt most severely in the north-middle counties. In the Miami country, there was a large proportion of dry, fair and pleasant weather, but no signs of drouth. At Cincinnati, there fell, in the months of June, July and August, *fourteen and a half inches of water*, which is a full proportion. Notwithstanding this, there was unquestionably a deterioration of the crop in some parts of the State from drouth.

In general, the season of 1861, like that of 1860, has been uniform and pleasant. There has been little seriously to complain of. Health, like the season, has been generally good, and mortality has probably been less, proportionably, than for any period in many years.

II. METEOROLOGY.

Meteorology is gradually approaching the certainty of a science. We find that all the great elements—such as rain, winds and temperature—have *determinable averages*, on limited surfaces, so that we really know that, in a given locality, that average will not be greatly exceeded or diminished. If it has been much increased in any season or year, we *know* with certainty that it must be diminished in the succeeding one. Nature has a system of compensations in rains and winds as well as in all other elements of motive power. Meteorology is, therefore, approaching a science—a science of which our knowledge will be due to patient unambitious observers. There are several such in this State, among whom I may mention Mr. Roswell Marsh, of Steubenville, and Dr. S. P. Hildreth, of Marietta. The former has recorded in the “American Almanac” the result of twenty-nine years observations. Although the results at Steubenville in any one year might be very far from being those of the whole State, or of other localities, yet there are some *general laws* established there, which are also established by observations at other places.

1. The *mean temperature* of any one year is never more than three degrees, more or less, than the mean temperature of a series of years. This is proved by the observations of long periods at Cincinnati, Portsmouth, Marietta and Steubenville. The consequence is, that although there may be great variations in particular days—and sometimes very hot, or cold weather for a week or two, yet the *general average* of temperature is maintained with great uniformity.

2. The *coldest* month in the year is January—although there is often very little difference between that and December, and February.

3. The *hottest* month is July; and there is more difference in the summer months than in the winter.

4. The *fall of rain* is greater in summer than in winter; and greater in summer than in either season. This conclusion is, I imagine, rather opposed to the popular opinion. It is, however, the result of repeated observations. More rain falls in the month of June, in the State of Ohio, than in any month.

5. The summers have more *clear days* than any season. Since it has also the most rain; these facts are accounted for by the frequent and heavy showers of the summer, which rapidly clear off.

6. In Ohio, the *winds* from the south prevail over those from the north, and those from the west over those from the east. At Cincinnati, the southwest wind prevails over that from any other quarter.

The proportion of the leading winds there are in the proportion of the south west, 221; north east, 136; and south east, 106. From April to November the south west wind prevails two-thirds of the time. In these months the winds receive their direction from the Gulf of Mexico, and pursue the general course of the Mississippi, diverging through the valley of the Ohio. On the lakes the opposite effect is produced, in no small degree, by those great bodies of water. I have no sufficient data, however, on which to state the currents of wind on the lake shore.

These general principles of meteorology seem to be well ascertained ; but within these limits there is room for great variation and diversity. Hence the meteorological phenomena of each year become interesting, not merely in their practical results, but as still exhibiting unsolved problems in that course of nature which we believe in this, as in other operations of nature, to be capable of being reduced within the rigid rules of science.

The meteorology of the year 1861 has not been remarkable ; but in the tables (Vide Tables 1, 2, 3, 4 and 5) furnished by my correspondents there are several striking facts.

1. OF THE FALL OF WATER.—In the southern and eastern part of the State, the month of August was remarkable for *heavy rains*. In Columbiana county, (See Dr. Hildreth's report) on the 12th of August, there fell, in six hours, *seven inches of rain*. The streams were overflowed, and much damage done.

In this place I may mention the great rains which fell in September on the head waters and branches of the Allegheny, Monongahela and Kenhawa, and from which our troops, on the Kenhawa, suffered severely. The rain commenced on Thursday the 26th of September, in the afternoon, and by Sunday morning at one o'clock, the Great Kenhawa, at Charleston, had risen 58 feet ; Friday evening and Saturday it rose 45 feet in twelve hours—nearly four feet an hour. The damage from this storm was very great. Great quantities of corn were destroyed on the bottoms of the Ohio and Scioto. On the 29th and 31st of September, says Dr. Hildreth, the Ohio river, at Marietta, "was covered with drift, embracing logs, boards, bridges and fences, with the dead bodies of many domestic animals." On the 21st of August, at Cincinnati, "there fell, in two hours 3.35 inches, the heaviest rain, says Mr. Harper, at this point, on record."

2. HAIL.—On the 12th of July there was, in the vicinity of Cincinnati, a heavy fall of hail, which did considerable mischief to the vineyards of that region.

3. DEPTH OF WATER.—The aggregate fall of water, though more variable than that of mean temperature, does yet, in the *same locality*, admit of general averages from which there is no great variation. There is, however, great difference in different localities. There are some places in Ohio where the average depth of fallen water is not more than two-thirds that of others. These variations are, no doubt, due to some local characteristics, such as altitudes and winds. In such places there are usually compensations by which vegetable life is generally made as prolific in one as the other ; but by no means in the same species of plants. It is here that meteorology comes in to aid experience in determining what kinds of grain, grapes or fruits may be advantageously cultivated. Here I may present, in a brief space, a comparative view of the fall of water in several places during 1861 as compared with the *mean fall* of water in the same places.

Place.	Fall in 1861.	Mean Fall.	Observers.
Marietta.....	46.262 inches.	41.90	Dr. S. P. Hildreth.
Cincinnati.....	40.323 "	48.02	G. W. Harper.
Steubenville.....	45.95 "	40.58	R. Marsh.
Medina.....	28.174 "	20.474	W. P. Clark.
Kelley's Island.....	29.47 "	27.74	Geo. C. Huntington

It will be seen from this table that it was on the upper Ohio valley that the excess of rain fell. At Cincinnati and at Medina the quantity was below the average, notwithstanding that at Cincinnati seven inches of rain fell in the month of August. Looking to these facts, the great fall of water on the upper Ohio is perfectly consistent with drouth through a large part of middle Ohio.

4. MEAN TEMPERATURE.

Place.	Mean temperature of 1860-'61.	Mean temperature of a series of years*
Kelley's Island....	49.26 degrees.	49.41 degrees.
Medina.....	49.2 "	49.00 "
Steubenville	51.41 "	51.8 "
Marietta	51.55 "	53.20 "
Cincinnati....	54.4 "	54.54 "

The general mean above is ascertained by the mean of the last four years reported to me; but the mean of those four years is above the mean of the last twenty. The real mean temperature of Cincinnati is but little over 52° instead of 54°. It will be seen that the temperature of the last year varies but little from the temperature of the last four; verifying the remark made in a former report, that we are probably in a cycle of years milder in temperature, and more favorable to crops than we had previously.

There is a popular opinion, both in Europe and America, that the severity of winters has declined, and that on the whole, temperature has become warmer. In Europe this was supported by the assertion that the large rivers had been frozen over in ancient times far beyond what they had in recent centuries. This, however, was disproved by Arago, who showed, by reference to historical events, that each of the rivers in Europe had been frozen just as hard in each century of the Christian era. In this country it has been supposed that the clearing up of extensive forests had an influence on temperature. This again is disproved by the severe winters of 1855-'56 and 1856-'57—winters which were colder than any two successive winters since the first settlement of the west. There is no doubt that the clearing up of the forests has had great influence on the dryness of the soil, and the average amount of water in deposit. If meteorological observations are accurately kept during a long series of years, there can be no doubt that many principles, which are now indeterminate, will be ascertained, and a science evolved which will be practical as well as speculative.

III. HORTICULTURE.

The Horticulture of Ohio, in 1861, has been signalized by an almost total failure of fruit in the eastern and central parts of the State, and of remarkable exceptions to that rule in the south western counties. From Warren county to Mahoning—including the whole region of the Scioto, Hocking, Muskingum and Mahoning—no peaches, and but few inferior apples were produced. In three-fourths of the State little fruit, except the berries, was raised. The exceptions to the rule were mainly the lower Miami country and Sandusky bay. In the counties

of Warren, Clermont, Butler and Preble, great quantities of peaches were raised. The quantity of peaches brought to market from Warren county is estimated at 50,000 bushels—at \$2.00 per bushel, making the handsome sum of *one hundred thousand dollars* for one kind of fruit. I am told that the county of Clermont produced nearly or quite as much. Butler, Preble and adjoining districts, produced some surplusses; so that it is not extravagant to say that the peaches of this section brought in *two hundred and fifty thousand dollars*. The line of peach production was quite marked. Immediately north of Warren county no peaches of any consequence were ripened. In Clark county there were none.

The cause of this failure was, I have no doubt, the frost of May 2d. It is quite remarkable that the limits of destruction in May, 1861, were almost identical with that in June, 1859. The mischief done was, however, of a different kind. In June, 1859, the wheat was destroyed on almost exactly the same surface as the fruit in 1861.

It has been said, and I think with some truth, that the *seedling* peach tree is hardier, and a better bearer, than the grafted trees. They may, therefore, escape the frosts, in some years, when the finer varieties will be killed. This was the case with a small orchard of my own. I bought one hundred seedling trees, and set them out at the end of an orchard in which there were another hundred of the finest varieties. The seedling trees bore a heavy crop, while the grafted trees were almost a total failure. More than one experiment is, however, needed to test the truth of this theory. I found that my seedlings not only bore, but bore very good fruit of a small size. This kind will not, of course, bear a high price; but it is a good deal more profitable to have these than to have none.

There were very few apples, and those inferior, in the Miami country; but the crop of small fruits was remarkably good: cherries were very abundant, as were currants and raspberries and blackberries. Indeed, it seems that the small fruits are, in this State, far the most reliable. So high priced are they in the large markets, and the demand is so good, that the cultivation of currants, raspberries, gooseberries, etc., seem to open a fair field of enterprize for those who make horticulture a profession.

The grape culture in the year 1861 has been subject to some vicissitude. In the Miami country the hail, the early dryness, and, perhaps, some latent cause, injured the crop, and made it, on the whole, inferior. On the other hand, the grapes in the northern part of the State were abundant and superior. There is renewed evidence that the atmosphere and soil of the lake shore are well adapted to grapes.

IV. GENERAL CONDITION AND PROGRESS OF AGRICULTURE.

It will be seen, by reference to Table 11, containing the accounts of intelligent observers in all parts of the State, that the crops of 1861 were not equal to those of 1860. I estimate the difference to be at least ten per cent. If this be correct,

the *aggregate* of all crops in 1861 was fifteen millions less than that of 1860. If it is not more than that, the harvest was still up to the average. An *average* crop is one which is the average of several years, and is not the average of quantity, but of quantity *per acre*. An increased surface of ground cultivated may produce a greater aggregate in bushels, while the average per acre is really less. Since we have now accurate returns of the principal grain crops for eleven years, this is a proper place in which to take a view of *average production* of grain crops in Ohio. In the first place, let us notice the aggregate crop of 1860. (*Vide* Tables.) They were as follows, viz :

	Bushels.
Corn	91,588,704
Wheat.....	23,640,356
Barley.....	1,548,477
Rye.....	1,078,764
Oats	25,127,724
Buckwheat.....	733,960
Potatoes.....	9,365,386
Aggregate.....	153,113,341

The statistics of potatoes were not taken before the last year, and are, no doubt, imperfect; yet, the returns show that the quantity produced was nearly double that returned for Ohio in the United States census of 1850. In good seasons I have no doubt we produce ten millions per annum.

The *aggregate* crops of wheat and corn during eleven years (1850 to 1860, inclusive), were as follows :

Year.	Corn, bushels.	Wheat, bushels.	Aggregate, bushels.
1850.....	65,500,000	32,700,000	98,200,000
1851.....	61,171,282	25,309,225	86,480,507
1852.....	58,165,517	22,962,774	81,128,291
1853.....	73,436,090	17,118,311	90,554,401
1854.....	52,171,551	11,819,110	63,990,661
1855.....	87,587,434	19,569,320	107,106,754
1856.....	57,802,515	15,333,837	73,136,852
1857.....	82,555,186	25,397,614	107,952,800
1858.....	50,863,582	17,655,483	68,519,065
1859.....	68,739,846	13,347,967	82,078,803
1860.....	91,588,704	23,640,356	115,229,060
Aggregate for eleven years.....	749,522,697	224,853,997	974,376,694
Average annual crop	68,138,427	20,441,277	88,579,608

This table shows that the average *quantity* of the corn crop was very nearly the actual crop of 1859, and the average wheat crop very nearly that of 1855. The growth of corn production is, therefore, much more rapid than that of wheat; in fact, the wheat crop has advanced very little in twenty years, and its vicissitudes are so great that no certain prediction can be made of results till the very day of harvest. In the meantime, however, the localities of wheat culture have greatly changed. Prior to the last half dozen years very little of the bottom lands of the

Miamis were cultivated in wheat. Corn was grown on them for a generation without change. But, since the comparative failure of the wheat harvest in other portions of the State, and since *rotation* of crops is now well understood to be one of the chief elements of agricultural success, a large quantity of the Miami country has been sown in wheat, with most evident profit to both land and proprietors. Since, also, the heavy frosts of June 5th, 1859, and May 2d, 1861, have spared the crops in the south-western portion of the State, there is greater encouragement to farmers in cultivating wheat and fruits.

The change of localities in wheat culture I referred to in my report of 1858, but the following tables of twelve counties in the Miami country and twelve in the old "wheat belt," for the years 1851 and 1860, (in which the aggregates of wheat produced in the State were nearly equal), will illustrate this in a more striking manner. The growth of wheat in the Miami country has steadily advanced, while that in the north-middle counties has declined very rapidly. In the last year or two there has been some revival of wheat in that region, especially in the noted wheat county, Stark :

Counties.	Wheat in 1851, bushels.	Wheat in 1860, bushels.
Butler.....	377,738	639,578
Champaign.....	600,641	573,550
Clark.....	447,319	552,193
Clermont.....	203,498	314,511
Clinton.....	201,445	386,289
Darke.....	324,958	564,164
Greene.....	442,598	537,440
Hamilton.....	79,264	212,991
Miami.....	467,555	588,782
Montgomery.....	566,952	507,768
Preble.....	376,561	482,120
Warren.....	325,118	466,881
Aggregates.....	4,413,647	5,826,267

This is an increase of 32 per cent., or about one-third. Had this rate of increase prevailed throughout the State, the crop of 1860 would have been thirty-two millions of bushels. This was far from being the case, as we shall see by a similar table of the "wheat belt." It is worth while to look at these variations, and we shall perhaps find that a *rotation*, not merely on single farms, but on a large scale, would be of essential benefit in a large state. Such a thing cannot be brought about by law, nor perhaps by a general agreement, but when a large district has got into the habit of raising some particular crop, intelligent farmers having a knowledge of the benefits of rotation on a large scale, may drop for a time their favorite plant, and revive and fertilize their farms by the introduction of a new culture :

Counties.	Wheat product in 1851, bushels.	Wheat product in 1860, bushels.
Ashland.....	573,176	367,859
Belmont.....	563,467	189,634
Carroll.....	427,714	271,782
Columbiana.....	459,887	220,697
Harrison.....	430,645	129,671
Holmes.....	426,114	336,555
Jefferson.....	469,401	183,289
Knox.....	446,645	258,461
Richland.....	557,059	429,113
Stark.....	892,233	690,769
Tuscarawas.....	656,172	472,838
Wayne.....	832,059	573,946
Aggregates.....	6,734,172	4,124,414

By this statement it will be seen that the largest wheat counties of the State, ten years ago, have, in a comparison of fair years, fallen off in their production about 40 per cent. The counties of Stark and Wayne maintain a much nearer proportion to the old average, but are still much below their old production.

In this place we may next inquire into the *ratio per acre*, which is the true test of increasing or decreasing production. The following is the *average* in wheat and corn for eleven years :

Year.	In wheat, acres.	In corn, acres.
1850.....	1,742,000	1,537,947
1851.....	1,657,252	1,664,427
1852.....	1,624,715	1,730,188
1853.....	1,421,826	1,836,493
1854.....	1,475,935	1,972,337
1855.....	1,407,773	2,205,282
1856.....	1,478,174	2,084,893
1857.....	1,823,147	2,254,424
1858.....	1,695,412	1,834,138
1859.....	1,780,543	2,431,312
1860.....	1,844,677	2,397,639
Aggregate.....	17,951,454	21,949,080
Annual average...	1,631,950	1,995,371

By taking the annual average of *production* in the former table, and the annual average of *acres* in this, and dividing the former by the latter, we shall ascertain the *mean average per acre* ; which we can again test by taking the average of each year. Applying these tests, we have the following results, viz :

Average annual crop of wheat (page 13).....	20,441,277 bushels.
Average annual acreage.....	1,631,950 acres.
Average production per acre.....	12 5 bushels.

Let us test this by taking the separate averages *per acre* of each year. These ratios were :

	Bushels per acre.
In 1850.....	17.3
In 1851.....	15.2
In 1852.....	14.1
In 1853.....	12.
In 1854.....	8.
In 1855.....	13.8
In 1856.....	10.2
In 1857.....	14.
In 1858 ..	10.4
In 1859.....	7.3
In 1860.....	12.8
Total of eleven years.....	135.1
Average per acre.....	12.3

This is precisely the same as the other, since the deficiency of two-tenths of a bushel is only caused by not carrying the decimals farther for each separate year.

It will be observed that the *highest ratio of production* was in 1850 and 1851, when the aggregate crops were also the largest. The *lowest* were in 1854 and 1859; the former being produced by *excessive drouth*, and the latter by *late frost*. The other seven years were fair, common crops, between 10 and 14 bushels per acre. The cultivation of wheat now extends in this State to nearly two millions of acres—a surface large enough to test very accurately the average production of this grain. We see by the above tables that on a large surface, and in a series of year, the production per acre is just *twelve and a half bushels per acre*. Unless, then, we can improve the mode of culture, this will continue to be the uniform result in a series of years. Unquestionably there are modes of improved culture, which consist, chiefly, in these elements: 1. Deep ploughing; 2. Drainage, where needed; 3. Good sound seed—a thing often neglected; and 4. Abundant and rich fertilizers; this last being, perhaps, the most important. *Artificial* fertilizing requires capital—a capital sometimes equal to the original value of the ground. It is this probably which prevents its general adoption. Up to a given point, ascertained by the capacity of the soil, crops will be profitable just in proportion to the capital put upon the land.

Let us now turn to the *ratios* of the corn crop, which is the great staple of Ohio :

Average annual crop of corn (page 13).....	68,138,427 bushels.
Average annual acreage (page 15).....	1,995,371 acres.
Average production per acre.....	34.1 bushels.

Let us now take the average of each year, as in the case of wheat, and test the accuracy of this result :

Average of corn in 1850 per acre.....	36 8 bushels.
" " 1851 "	36 7 "
" " 1852 "	33.6 "
" " 1853 "	40.0 "
" " 1854 "	26.0 "
" " 1855 "	39.7 "
" " 1856 "	27.7 "
" " 1857 "	36.6 "
" " 1858 "	27.7 "
" " 1859 "	29.5 "
" " 1860 "	38.2 "

Total product of an acre in eleven years..... 372.5 "

Average per acre in one year 33.9 "

There is here also a deficiency of *two tenths* of a bushel, which, as I remarked, in the case of wheat, will be made up by extending the decimals another place. *Thirty-four bushels per acre* is the exact average of production of maize (Indian corn) in a long series of years on all qualities of soil. The difference of soils in the case of Indian corn makes very great differences in the amount of production—more so, probably, in that grain than in any other. If thirty-four bushels be the general average, the average of uplands will not be more than twenty-two, while that of bottom is forty-four.

It will be seen that the crop of 1860, though the largest in quantity, was not the highest production per acre. The crop of 1853 and 1855 were both a greater average per acre. Of the eleven years above taken, six were above the average. Corn has few enemies in comparison with wheat. The greatest enemy of corn is drouth, though in one year (1858) the crop was greatly reduced, especially on the bottom lands, by heavy rains at the planting season.

OF OATS.—We do not know the products quite as accurately as we do that of corn and wheat, for we have only had the State statistics during the last four years. Taking these with the United States Census of 1840 and 1850, (the crops being those of the previous years), we have these results:

	Acres.	Product.	Av per acre.
In 1839 .....	.....	14,393,103	.....
In 1849 .....	.....	13,472,742	.....
In 1857 .....	.....	22,000,000	.....
In 1858	669,147	8,026,251	12
In 1859	643,613	15,048,910	23
In 1860	830,104	25,127,724	30

If the years 1858, 1859 and 1860, be taken as a fair test the average crop of oats is *twenty two* bushels per acre, though, probably, from the extremely low product of 1858, is really above that. It will be seen that the average of oats has increased in the last three years near 30 per cent. In the northeastern counties of this State, very heavy crops of oats are raised.

OF BARLEY, RYE AND BUCKWHEAT.—The following is the production of these grains for the only years we have:

	Rye in acres.	Bushels.	Average.
In 1839 .....	.....	814,205	....
In 1849 .....	.....	425,918	....
In 1858	90,191	874,513	9.7
In 1859	102,776 $\frac{3}{4}$	576,274	5.6
In 1860	94,394	1,078,764	11.5

Except for spring pasture, or straw, there is little encouragement to cultivate rye in this State.

	Barley in acres.	Bushels.	Average.
In 1839.....	.....	212,440	....
In 1849.....	.....	354,358	....
In 1858.....	125,745	2,103,099	16.7
In 1859.....	102,931	1,638,577	16.0
In 1860.....	71,564	1,548,477	21.6

The average of barley is more uniform than that of other small grains. It is most cultivated in the neighborhood of the great breweries at Cincinnati and Cleveland. One-half of all barley grown in the State is raised in the Miami country.

	Buckwheat in acres.	Bushels.	Average.
In 1839.....	.....	633,139	....
In 1849.....	.....	638,060	....
In 1858.....	71,282	791,921	11.1
In 1859.....	149,445	3,042,176	23.5
In 1860.....	66,827	763,930	11.1

The extraordinary production of buckwheat in 1859 was in consequence of the destruction of the wheat crop in June. It was still time to plant buckwheat, which was extensively sown in the northeast part of the State.

It may be well here to look to the average of grain crops in this State for the last three years—the only years of which we have a full return. The aggregate acreage of Ohio in wheat, corn, rye, barley, buckwheat and oats, for the last three years, was as follows, viz:

	Acres.
In 1858, aggregate average.....	4,485,891
In 1859.....	5,210,640
In 1860.....	5,305,205

We see in this statement a gradual and certain increase of *ploughed land*. The whole of it is, however, but a *fifth part* of the surface of the State. It is quite evident another fifth may be employed in this way without materially diminishing the grass land, or the quantity of timber necessary for ordinary purposes. In that case, the annual grain production of the State would reach *three hundred millions of bushels per annum*; to which, I confidently believe, it will reach in another generation.

It may be interesting to look at the counties which produce the greatest aggregate of grain, including oats, which may, in case of necessity, be converted into bread, as is done in Scotland. The following are the chief grain counties, in their order, viz:

	Bushels.
Butler.....	3,723,615
Ross.....	3,685,007
Pickaway.....	3,408,145
Franklin.....	3,267,129
Greene.....	3,038,923
Warren.....	2,998,912
Miami.....	2,963,444
Fairfield.....	2,927,577
Fayette.....	2,883,972
Licking.....	2,882,352

These ten counties average 3,177,000 bushels, which is one-fifth the whole

grain product of the State. If we look to their situation, and especially to the streams of water flowing through them, we shall find that it is the counties which have the most alluvial land. If we contrast two districts of the Scioto and Miami country by surface and population, as well as production, we have the following results :

	Surface.	Population.	Production.
Butler	400 square miles.	35,842	3,723,615 bushels.
Warren	400 "	26,970	2,998,912 "
Aggregates	800 "	62,812	6,722,527 "
Average product per square mile			8,403 bushels.
" " " individual			107 "
" " " acre			31 "
	Surface.	Population.	Production.
Ross	600 square miles.	35,152	3,685,007 bushels.
Pickaway	400 "	23,471	3,408,145 "
Aggregates	1,000 "	58,623	7,093,152 "
Average product per square mile			7,093 bushels.
" " " individual			121 "
" " " acre			31.5 "

There is a remarkable similarity between these two districts, and probably there is no equal space of ground on earth which produces as much grain ; at least, if there is any, it must be in some other part of the Ohio Valley. It is the immense productiveness of Indian corn which causes this result. I do not know the weight of rice produced per acre in the Asiatic countries, but I cannot think it as great as that of corn. Neither in Europe, nor in our States, nor in the Southern, can this rate of production be equalled.

What are the relative AVERAGES PER ACRE of Europe and America ? It is a very common idea, and repeatedly asserted, that the average product of wheat in Europe, especially Great Britain, is much greater than ours. There is some reason to doubt this, if we take exactly the same standard of comparison. For example, when we take the average per acre, do we take the *same amount of seed per acre* ? I find that McCullough, in the "Statistics of the British Empire," states the average per acre for Scotland to be 28 bushels, and for Ireland 24 bushels ; but the amount of *seed* allowed is *four bushels per acre*. I do not know whether so much is actually planted ; but if so, then the product *per fold* (which is the ancient mode of counting crops) is no greater than ours. However this may be, I am entirely convinced that, if the *capital* (whether in seed or fertilizers) be counted, the *relative* produce of wheat per acre is as great as in Great Britain, the greater numerical crop there being produced by more seed and more fertilizing. The following examples of average crops in Europe are derived from the official statistics, except those of McCullough in Great Britain, which I believe too high :

In Scotland	28 bushels.
In Ireland	24 "
In France	13.3 "
In Galicia	8 "
In Austria	8 "

The statistics of Europe, which I have here referred to, were taken from twenty or thirty years since, and it is probable that agriculture there has been much improved since. If we take the *average weight* of grain per acre (which includes Indian corn), there is no country which equals the average of Ohio.

OF HAY.—The following is the production of the year 1860 :

Aggregate in meadow	1,538,562 acres.
Tons of hay produced.....	2,027,160 "
Average per acre.....	1.32 ton.

The following is a comparison of the hay crop for several years :

	Acres.	Tons.	Average per acre.
In 1857.....	1,250,000	1,701,245	1.36 ton.
In 1858.....	1,357,874	1,806,461	1.33 "
In 1859.....	1,340,672	1,366,055	1.01 "
In 1860.....	1,538,562	2,027,160	1.32 "

The crop was about an average one per acre, but a much larger aggregate quantity, as there was a larger space of ground in meadow. The following are the ten leading counties in hay, viz :

Trumbull.....	80,765 tons.
Ashtabula.....	72,431 "
Portage.....	62,778 "
Geauga.....	54,325 "
Stark.....	52,377 "
Mahoning.....	51,771 "
Columbiana.....	51,002 "
Wayne.....	51,065 "
Medina.....	47,042 "
Cuyahoga.....	45,002 "
Ten counties.....	488,158 "
Same counties in 1859.....	329,386 "
Increase.....	158,772 " = 49 per cent.

These counties are those in which large numbers of cattle are raised for dairy purposes. There is a remarkable difference in the amount of these crops, showing very clearly that the product of grass is, like that of grain, subject to great vicissitudes.

OF POTATOES we have this year the only correct return since 1849. The returns of three crops, at the interval of ten years each, give the following results, viz :

In 1839.....	5,895,021 bushels.	U. S. Census.
In 1849.....	5,433,751 "	"
In 1860.....	9,365,386 "	State assessors.

This shows a very large increase on the crop of 1839, but not so large as that of our great staple—corn.

The counties which have produced the most potatoes are :

Cuyahoga.....	320,346 bushels.
Hamilton.....	316,471 "
Clermont.....	284,437 "
Lake.....	251,265 "
Trumbull.....	216,609 "
Ashtabula.....	232,610 "
Erie.....	208,755 "
Portage.....	207,747 "
Lorain.....	201,218 "
Morrow.....	184,107 "

Immediately around Cincinnati and Cleveland the largest proportion of potatoes are grown; but, aside from the demand of these cities, the largest amount is grown in the northeastern portion of the State, whence they are probably exported to the Atlantic. The above ten counties raised one-fourth of the whole crop.

OF BUTTER AND CHEESE—This is the first year in which the State assessors have returned the quantity of butter and cheese. As might be expected, the product of these articles is greatest in those counties where cattle and hay abound. The total amount returned by the United States census for 1849 (returned in the census of 1850), and that of the State in 1860, are as follows:

	Butter.	Cheese.
In 1849.....	34,449,379 lbs.	20,819,512 lbs.
In 1860.....	38,440,498 "	24,816,420 "

The increase in the past ten years has not been very great, when compared with some other products. The counties which have produced the most are these, viz:

	Butter.	Cheese.
Geauga.....	723,681 lbs.	5,299,144 lbs.
Trumbull.....	1,081,178 "	4,450,412 "
Portage.....	1,036,928 "	3,784,284 "
Ashtabula.....	751,881 "	3,308,666 "
Cuyahoga.....	779,756 "	1,806,051 "
Summit.....	729,942 "	1,601,838 "
Lorain.....	1,216,200 "	1,325,781 "
Medina.....	936,907 "	770,222 "
Lake.....	330,410 "	286,274 "
Wayne.....	862,095 "	45,702 "

These are all the counties which make any notable amount of cheese, and they make eleven-twelfths of all made in the State. Butter being an article of universal consumption, and not largely exported, is more equally diffused, enough for domestic consumption being made in every county. The counties above, and some others, export considerable amounts of butter, though by no means equal to the export of cheese.

OF ANIMALS.—The assessors make their returns in June, so that we get the animals of that year, but the crops of the year before. The following is a tabular view of the number of animals, in four different years, in the last period of eleven years:

	1850.	1855.	1860.	1861.
Horses.....	466,820	624,746	700,097	726,648
Mules.....		5,315	7,624	11,018
Cattle.....	1,358,947	1,791,189	1,902,712	1,839,757
Sheep.....	3,942,929	4,337,943	3,368,174	3,934,763
Swine.....	1,964,770	2,195,769	2,242,814	2,571,404
Aggregate.....	7,733,466	8,954,952	8,221,481	9,083,590

It will be seen that horses and swine show a steady increase, while in sheep there is a great variation. The main value of sheep consists in the wool, and the market for that varies with the tariff, which has been very uncertain. In the last year, the number of cattle has slightly diminished. The cause of this is not very

obvious ; though it is probably a diminished demand for dairy products, and an increased exportation of beef cattle. Hogs continue to increase and to be exported from the State, in immense amount, either in the form of pickled meats, or of live and dressed hogs. Sheep increased no less than six hundred thousand in the last year, which is due to the increased demand for woolen goods, under the tariff of 1860. The still further demand for woolens caused by the war, which has stimulated the woolen factories, will no doubt still further increase the number of sheep in this State.

It may be interesting to state the counties and sections of the State in which different classes of animals prevail, as we have done in the case of grain.

The ten counties of the largest number of horses, are the following :

Hamilton.....	16,759
Licking.....	14,655
Franklin.....	14,076
Muskingum.....	13,731
Stark.....	13,662
Wayne.....	13,137
Highland.....	12,729
Fairfield.....	12,249
Montgomery.....	12,064
Butler.....	12,023

The ten counties having the greatest number of hogs, are the following :

Ross.....	76,222
Franklin.....	67,029
Fayette.....	64,484
Pickaway.....	63,508
Greene.....	56,963
Brown.....	54,344
Clinton.....	56,282
Fairfield.....	51,201
Preble.....	51,970
Licking.....	48,219

The number of hogs is chiefly influenced by the production of corn. The above are very nearly the highest, in the quantity of corn.

The counties having the greatest number of sheep, are as follows.

Licking.....	169,697
Harrison.....	163,548
Columbiana.....	141,357
Jefferson.....	131,381
Muskingum.....	112,421
Carroll.....	109,521
Tuscarawas.....	106,679
Medina.....	98,487
Guernsey.....	97,309
Knox.....	93,437
Mahoning.....	90,069

After these, the counties adjoining them rank highest ; showing that sheep are produced mainly in the northeastern part of the State, where grass most abounds. In fact, twenty counties in that region raise half the sheep raised in the State.

The following counties produce the most cattle :

Trumbull.....	49,539
Ashtabula.....	42,070
Portage.....	38,397
Lorain.....	36,996
Geauga.....	36,995
Muskingum.....	35,073
Wayne.....	35,172
Stark.....	33,751
Fairfield.....	34,086
Licking.....	33,107
Tuscarawas.....	31,912

The largest number of cattle are in the dairy counties, though many of the corn counties—such as those in the Scioto Valley—feed a great many cattle for the Eastern cities. Ohio exports a great number of cattle, most of them reared in the State, but many thousands are brought from the West to be fattened here. This traffic has brought millions of dollars into the State annually.

The following table is constructed to show the relative rank of the most productive counties, in each article of the produce of agriculture, beginning with grain. It is combined from the previous tables, and gives the ten highest counties, in each product :

Counties.	Corn.	Wheat	Oats.	Hay.	Hors's.	Cattle.	Hogs.	Sheep.
Ross.....	1	23	74	70	15	17	1	58
Pickaway.....	2	31	77	67	14	31	4	67
Franklin.....	3	28	42	35	3	21	2	56
Fayette.....	4	49	81	75	37	32	3	43
Butler.....	5	3	44	76	10	58	10	85
Greene.....	6	9	50	58	20	41	5	54
Clinton.....	7	20	52	54	27	47	6	45
Warren.....	8	14	32	62	19	60	17	75
Fairfield.....	9	17	21	34	8	8	9	48
Licking.....	10	30	10	11	2	10	12	1
Stark.....	47	1	3	5	5	9	31	16
Seneca.....	34	2	6	14	11	19	29	20
Miami.....	11	4	20	66	33	55	23	73
Wayne.....	32	5	1	7	6	67	30	21
Champaign.....	12	6	37	39	32	42	30	40
Darke.....	25	7	35	64	25	20	11	66
Clarke.....	16	8	42	47	37	48	28	34
Montgomery.....	13	10	14	60	9	44	17	83
Richland.....	44	18	2	15	17	18	27	25
Belmont.....	24	..	4	26	12	24	36	13
Tuscarawas.....	..	13	5	21	17	11	21	7
Columbiana.....	80	44	7	8	26	27	64	3
Crawford.....	30	41	8	20	45	33	22	31
Ashland.....	52	21	9	17	41	34	48	23
Knox.....	22	39	11	21	16	25	33	10

SORGHUM—It is a subject of congratulation that the Sorghum cane has so far succeeded in this State as to be no longer doubtful. As yet, molasses only has been made on a large scale ; but there have been several experiments, proving that sugar can be made, and, probably, when it is equally profitable to make sugar, it will be manufactured in quantity. For the State generally, we have no

accurate statistics ; but some of my correspondents have mentioned the subject, and given local facts, which indicate the progress in this culture.

Mr Coolidge, of Lake county, says that 10,000 gallons of Sorghum molasses were made in that county. The average was 240 gallons per acre.

Mr. C. Springer, of Meadow Farm, Muskingum county, says : " This season indicates a new era in the Sorghum culture. Many farmers have mills and evaporators. One farm has made 700 gallons this year. The rise of molasses, in consequence of the war tariff, has fixed the public determination to take hold of this subject in earnest."

I have heard, verbally, from several other counties, in which Sorghum is cultivated. In the whole State, there must have been quite a large quantity of molasses made.

Taking the facts presented by the Lake county culture, and it is evident the culture of Sorghum must be profitable. At forty cents per gallon, which is below the ordinary market price, an acre of Sorghum produces, in the form of molasses, about one hundred dollars in value. The culture of Sorghum, up to the process of crushing the cane, can be little, if any, more expensive than Indian corn ; and it is evident the crushing and evaporating cannot be very expensive. It is plain, therefore, that such a crop as was raised in Lake county, must be more profitable than that of any of the common cereals. If this should continue to be the case, there is no doubt we shall soon supply ourselves entirely with native molasses—not an unimportant fact in the progress of agriculture.

OF FLAX—Preble county reports 1,909 acres in flax, and 13,445 bushels of seed. It must be considered not a little remarkable, that the culture of flax, as a staple, has almost disappeared. Although cotton has been substituted for it in many uses, yet flax is still a very valuable plant, and linen goods are imported in great quantities. The disuse of flax and substitution of cotton, has caused the manufacture of domestic linens by the wheel and loom to disappear also. The people have grown richer—but they are also more extravagant ; and a large part of the profits of agriculture and commerce is now employed in buying goods which were formerly made, to a great extent, in the family. Two or three counties on the western line of the State—in the Miami country—have cultivated flax for the seed only. It appears that, in Preble county, flax yields seven bushels of seed per acre ; and at \$5 per bushel, which is below the market price, flax yields a large profit.

OF COTTON.—It seems that cotton, which has been deemed exclusively a Southern production, has been raised successfully in southern Illinois and eastern Kentucky. If so, it may probably be raised in the southern borders of Ohio ; but whether profitably or not, is the question. It is certain, that the long stapled, finer qualities cannot be raised here. Indeed, that can only be raised on the sea-coast in the South. It is quite probable that, as this plant is carried further north, it will decline in quality. It is well worth trying, as an experiment ; but since all the cotton now used in commerce is grown south of 36 degree of latitude, it

is probable that little benefit can be expected from the culture of cotton so far north as Ohio and Indiana.

OF FENCES.—I give some statistics of fencing, since it gives reason to inquire, Whether some change in the law of fences, or, in the restraint of animals, be not necessary ?

The President of the State Board of Agriculture, in 1855 (James T. Worthington, Esq.), makes the following estimate :

The table below gives a near approximation to the present cost of fencing in the State, and falls far short of what it will amount to in a few years, under our present system :

Acres of inclosed land in Ohio.....	18,000,000 acres.
One mile of fence to each forty acres.....	450,000 miles.
Cost, 80 cents per rod, or \$256 per mile.....	\$115,200,000
Yearly expenses, equal to renewal every fifteen years.....	7, 680,000

Of which, at least one-third, or \$2,560,000, might be saved by laws, such as exist in other States, prohibiting domestic animals, and especially hogs and sheep, from running at large.

At the present time, I should estimate the cost of fencing at a much greater rate. The *average* size of farms in Ohio (or rather the *average amount taxed to each individual*) is 90 acres—giving 280,000 landowners. Of the 88 counties, 60 have more than 20,000 inhabitants—showing them to be nearly as populous as the counties of Ashland or Preble. The great body of the State is, therefore, fenced in, and the farms of small size subdivided into small fields. I should say, that the inclosed land was as much as above stated, and that there is a mile of fence to each thirty acres, which gives 600,000 miles of fence, which, at 80 cents per rod, is \$153 600,000. In this estimate, however, it must be recollected, that there is now a large quantity of board fence, which cannot be made at less than \$1 10 per rod.

I think the renewals are also placed too low. But, assuming the same data for that element, and we have the cost of *renewing* old fences in Ohio at *ten millions of dollars per annum*. How much of this is incurred for the sole purpose of fencing out trespassing animals, which, in the present state of the law, cannot be avoided, may be known by referring to the *road fencing*. We have in this State (as returned by the Auditors to me, *vide* Report of 1857) 62,000 miles of common roads. So much of these as are unfenced will be fully made up by the lanes and by-roads leading to farm-houses and distant fields. Double the length of common roads, and we have the fencing, viz : 124,000 miles road fence, or one-fourth the whole amount. The annual repairs on this fourth comes to \$2,500,000 ; and the interest on the original cost is \$2,200,000—making the annual expenditure for road fences \$5,700,000. It is entirely safe to say that one-half of this expenditure would be entirely unnecessary, if no animals were suffered to run at large. *Two millions and a half per annum* would be saved to the State, if it would protect each proprietor in the possession of his property. In Ohio there are *no commons*. In most of the counties there is not a single acre upon which any man but the proprietor has a right to put animals. Even the roads and highways, by the

theory of our law, belong *in fee simple* to the adjoining proprietors, the *use* only being granted to the public.

The following is an estimate made for the State of Maine, where this subject seems to have received attention :

“The Maine State Agricultural Society presents some striking statistics in relation to the cost of fencing. The fences of the State have cost \$25,000,000; the repairs require \$2,500,000 annually; 6 per cent. interest is \$1,500,000; and a renewal in twenty years would be \$1,250,000, making the total yearly expenditure \$5,250,000—or two-thirds the original cost of the Erie Canal. A strong argument in favor of soiling. Estimated cost of road fences, supposed to be at least one-sixth part of the whole, \$4,125,000.

“The interest and cost of annual repairs and renewing would be \$531,000—the tax paid annually by the farmers of Maine to make the highway a public pasture. To this sum is to be added \$150,000, the yearly cost of breaking through snow drifts caused by such fences, and opening roads. These estimates will do to apply to other places besides Maine. The custom now is that every man shall fence out all intruders; the time may come when this will be among the things of the past, as much as that of walling towns to shut out human marauders”

If we consider that Maine has but a fourth part of the population of Ohio—and two-thirds its surface is but little inhabited—the above estimate varies but little from the one we have made for Ohio.

I have stated, in a former report, that the valuable timber and forests of this State are fast disappearing. At first sight this seems an exaggerated statement; but an examination of the facts will prove its truth. The immense annual consumption of fuel for railroads, for fences, for buildings and firewood, is rapidly denuding the State of its once fine forests; and at the rate of consumption in the last ten years, it will not be long before timber will be scarce and high priced. We are apt to forget that Ohio is a State where every acre of land is arable; and hence there is a continual temptation to cut off the wood, and make the soil productive. In Virginia, Pennsylvania and New York, as well as Kentucky and Tennessee, there are immense mountain tracts, where the forests will never be cut off—except in the case of pine, cherry, and other fine timber. In Ohio it is the reverse. The forest will disappear from the whole surface as rapidly as the farmer can plough the land. Hence, the cultivation of HEDGES is already beginning to attract attention, and the time is near at hand when they must be cultivated, for mere economy. The introduction of the Osage Orange will, I think, prove, before many years, a great blessing. It is so rapid in growth, and becomes so large and strong, that in six years a hedge of this plant becomes so high and thick, that no animal whatever can penetrate. The annual saving to the State, by making the osage hedge on road and boundary lines, would be millions of dollars.

In concluding the statistics of agriculture, I take occasion to state, that in the five years since I have been engaged in investigating the elements of our social and physical condition, there has been an obvious and great advance in its agri-

cultural wealth and prosperity. A large increase has been made in cultivated land ; an immense number of new and labor-saving machines have been introduced ; the vineyards have been greatly extended ; the Sorghum has been successfully introduced ; the export and price of animals have increased. Thus the great natural elements of wealth, not exceeded on any equal surface of ground, have been gradually brought, by the art and labor of years, to produce their just effects, in bettering the condition and extending the prosperity of the people, to whom Providence has given such great and signal benefits.

V. EXPORTS OF PRODUCE.

I have taken no peculiar care this year to ascertain the exports ; and it could not be done without more agency than I had at my command. The returns of commerce at Cleveland, Toledo, Sandusky and Cincinnati, (which will be found in the section on Commerce and Navigation) with returns of railroads, enable us to approximate the extent of exports, and will show also a remarkable increase in some articles.

The following is a comparison of exports of some leading articles shipped by steamboat or by railroad, at the ports of Cleveland, Toledo and Cincinnati, in the year past :

	Cleveland.	Toledo.	Cincinnati.
Flour	1,535,475 bbls.	1,411,456 bbls. ..	500,000 barrels.
Wheat	925,958 bush.	6,173,000 bush. ..	300,000 bushels.
Hogs	238,000 number....	429,161 number..	450,000 number.
Cattle	196,367 number	73,820 number..	20,000 “
Wool	1,249,250 lbs.	1,147,851 lbs. ..	1,500,000 pounds.
Whiskey	36, 12 bbls.	159,666 bbls. ..	280,000 barrels.
Beef	2,300 bbls.	32,313 bbls. ..	18,000 barrels.
Corn	196,531 bush	51,276,221 bush. ..	150,000 sacks.
Other Grain	63,579 bush.	79,846 bush. ..	150,000 bushels.
Cheese and Butter....	7,060,420 lbs. ....	.....	2,350,000 pounds.

In the above table I have reduced the *pork* to hogs, in order to have a uniform measure ; and *bales* of wool to pounds ; and tons of cheese also.

It will be observed also that the Wabash & Erie Canal, and the Wabash Valley Railroad, bring an immense amount of produce to Toledo, which is hence exported. On the other hand, no account is taken above of what is exported to Pittsburg, and goes to the Pennsylvania Central ; nor from Sandusky, from which the account of specific articles could not be obtained. The following is the aggregate of the above articles :

Flour (barrels)	2,446,931	Beef (barrels)	52,613
Wheat (bushels)	7,398,958	Cattle (number)	290,187
Corn (bushels)	5,622,802	Hogs (number)	1,117,161
Other grain (bushels)	293,425	Wool (pounds)	4,397,081
Whisky (barrels)	475,778	Cheese and butter (pounds)	9,410,420

It will be observed that *twenty-five millions of bushels of grain* were shipped from Ohio last year ; more than a million of hogs ; and three hundred thousand cattle. Toledo has become the second largest *original* shipping port of grain on this continent ; and beyond doubt will become much more enlarged in its operations.

By "original" I mean those ports which receive the grain from first hands, and are merely transhippers of what is received through other ports.

The market value of the above list of articles exceeded fifty millions of dollars ; but does not include half our exported articles. For example, there is coal, tobacco, oils, hides, sheep, horses, lumber and salt.

One of the most striking effects of an increased grain crop is seen in the exports of the port of Cleveland—which in the last year—were the products of 1860, a year of very heavy grain crops. The exports of Cleveland for 1861 were in value *twenty millions greater* than in the year previous.

The effects of the war on the *exports* of Ohio have been comparatively small, except in the *mode* of transportation. We had the grain and it has been sent off, but almost entirely on northern routes. Not only was the lower Mississippi blockaded after May, but the upper part of the Baltimore & Ohio R. R. being made impassable, that great route was also abandoned, and the freight thrown on the northern railroads was altogether unprecedented.

VI. MANUFACTURES AND MINING.

In the report of 1860 I embraced all the statistics of industry in this State, compiled from the United States census returns for 1860, and all the mining of iron and coal. Since then there has been no change, except in diminishing the amount. The State returns of coal, made by the assessors and contained in table —, are no doubt deficient. The mining of coal has diminished in the last year or two, but not to the extent which appears in the assessors' returns. It would be very easy to obtain returns of every article of manufacture and of mining, as is done in New York and Massachusetts, as often as once in five years ; or in this State more conveniently, when new assessments are made of real estate. These returns, coming between those of the United States, would give more frequent and precise views of the variations in industry.

Since the return of industry for 1860 is full and complete, there is no need of repeating it here ; and I, therefore, leave this subject, with the single remark that the manufacture of clothing, which in Cincinnati had already attained an immense magnitude, has been further increased by the operations of the war.

VII. COMMERCE, NAVIGATION AND RAILROADS.

The following article has been prepared by Mr. HENDERSON, formerly of the *Buffalo Commercial*, and now in the office of the *Cincinnati Gazette*. It is full and accurate :

The State of Ohio is divided into four collection districts under the United States revenue laws. The districts are Cuyahoga, Sandusky, and Miami on Lake

Erie, and Cincinnati on the Ohio River. The ports of entry in these districts are Cleveland, Sandusky, and Toledo on the lake, and Cincinnati on the river.

The following comparative table represents the tonnage of each of these districts for the years 1851 and 1861 :

	1851.		1861.
Cuyahoga	36,070	.....	77,138
Sandusky	4,858	.....	15,614
Miami	3,286	.....	4,494
Cincinnati.....	16,150	.....	33,900

I have found it impossible to prepare a full and accurate exhibit of the commerce of the lake ports for the past year.

No reliable accounts are kept at the custom houses on the frontier of the imports and exports coastwise, though some of the collectors do pretend to prepare statements of this business. But it is known that they fail to obtain reports of all the produce and merchandise exported from and received at their several districts.

It is true vessel masters are required to furnish the collectors with a statement of every description of property that they land at or carry away from any port ; but this requirement of the revenue laws is never enforced, and masters of vessels have become careless and negligent, and the result is that all statistics or information concerning the domestic commerce of our lake ports, furnished from our custom houses, is meagre and unsatisfactory, and not to be relied upon.

But were it possible to obtain full exhibits of the imports and exports of our lake ports, we should still be unable to determine what proportion was the growth or production of Ohio, or how much was destined for consumption in the State.

The only statements of the lake commerce that are at all reliable, are those made up and compiled by the journals at lake ports, who keep, from day to day and month to month, the items from which at the close of the year they preface their annual exhibits. These, I have reason to believe, are as accurate as they can be made.

CLEVELAND.—The following table, from the *Cleveland Herald*, shows the total entrances and clearances of American and British vessels at the port of Cleveland for the past four years :

	American.		British.
1861	330	.....	382
1860	341	.....	326
1859	349	.....	341
1858	398	.....	296

The total entrances and clearances and tonnage for the past four years were as follows :

	CLEARED.		ENTERED.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1861.....	2,316	807,711	2,259	800,514
1860.....	2,209	783,187	2,187	827,273
1859.....	5,220	911,589	2,190	915,951
1858.....	2,084	700,577	2,137	721,519

A comparison of the entrances and clearances of American and British vessels employed in the foreign trade of the port, shows that the number of the former

has steadily decreased, while the visits of British vessels to that port have increased. This is due to the increased demand for vessels in the coastwise trade, and also to the discrimination against our vessels in the tolls of the Canadian canals.

The following table will show the amount of lake business at the port of Cleveland for the year 1861:

	Imports.	Exports.
Coastwise.....	\$24,022,579	\$43,399,813
Foreign.....	128,265	311,962
Total.....	\$24,150,844	\$43,711,775
Total business of the port in 1861.....		67,862,619
Excess of Exports over Imports.....		19,560,931

The following is a comparative table of the imports, exports and total business of the port of Cleveland for the past four years, as furnished from the custom house:

IMPORTS.			
	Coastwise.	Foreign.	Total.
1861....	24,022,579	128,265	24,150,844
1860.....	38,893,192	211,694	39,104,886
1859.....	29,336,079	208,428	29,544,527
1858.....	26,087,849	168,409	26,256,258
EXPORTS.			
	Coastwise.	Foreign.	Total.
1861.....	43,399,813	311,962	43,711,775
1860.....	22,931,828	306,258	23,238,086
1859.....	26,189,861	190,006	26,379,867
1858.....	23,166,256	224,986	23,391,242
TOTAL BUSINESS.			
	Coastwise.	Foreign.	Total.
1861.....	67,422,392	440,227	67,862,619
1860.....	61,825,020	577,952	62,402,972
1859.....	55,525,940	398,434	55,924,374
1858.....	49,254,105	293,395	49,547,500

From the above tables it will be seen that during the year 1861 the imports were below those of either of the preceding years, while the exports were nearly double those of any previous year.

The decrease in imports is accounted for in the greater economy of the people, and the consequent falling off in the importation of merchandise from the East.

The reason of the increase of exports will be readily seen. The crops for the past two years have been unusually good, and there has been a large abundance to export; while the demand for every description of produce has been active. Again, the blockade of the Ohio and Mississippi rivers, and the cutting off of all business intercourse with the South, has diverted large quantities of flour, grain and provisions, which could otherwise have sought a Southern market, to the East, by way of the lakes, while the closing of the Baltimore & Ohio Railroad to through traffic has thrown an immense amount of business on the northern routes and through our lake cities.

The foreign business shows no very material change. The imports have fallen off, and the exports have increased somewhat on those of 1858 and 1859, though less than those of 1860.

The following is a comparative table of the exports and imports at the port of Cleveland for the past three years, of a few of the principal articles of commerce :

EXPORTS.

	1859.	1860.	1861.
Flour, bbls.....	350,066	334,404	414,385
Wheat, bushels.....	262,248	857,166	871,371
Corn, bushels.....	18,427	146,016	196,581
Oats, bushels.....	19,481	19,255	4,483
Whisky, bbls.....	23,693	31,493	36,112
Pork, bbls.....	42,637	10,176	13,465
Beef, bbls.....	15,052	1,479	2,300
Wool, lbs.....	16,708	13,858	14,999
Coal, tons.....	135,463	159,906	205,164
Butter, kegs.....	17,440	22,674	25,642
Cheese, boxes.....	57,303	9,310	41,567
Tobacco, value.....	318,259	206,900	528,400
Eggs, bbls.....	3,290	2 270	5,217

IMPORTS.

	1859.	1860.	1861.
Copper, tons.....	2,703	5,566	5,577
Iron ore, tons.....	35,981	64,680	37,966
Iron—pig, tons.....	8,628	2,936	2,499
Salt, bbls.....	115,604	76,879	107,561
Potatoes, bushels.....	64,587	14,607	18,298
Lumber and lath, value.....	\$364,031	\$385,398	\$479,329
Coal, tons.....	2,292	3,196	3,022
Fish, bbls.....	21,501	11,935	9,994
Flour, bbls.....	16,984	8,706	10,666
Wheat, bushels.....	430,949	199,915	125,380
Corn, bushels.....	25,868	.....	3,822
Oats, bushels.....	1,392	14,397	1,690

The imports of merchandise in 1861 were \$18,130,300, against \$33,609,600 for 1860.

Since the opening of the Lake Shore Railroad from Cleveland to Buffalo and Dunkirk, a large quantity of produce has gone forward to the East by rail. From the reports of the Cleveland & Erie Railroad, we compile the following table of exports from Cleveland for a few years. The report for 1861 has not yet been made up :

	1858.	1859.	1860.
Flour, bbls.....	186,665	160,387	121,370
Wheat, bushels.....	83,319	103,099	54,587
Other grains, bushels.....	340,927	116,818	62,896
Hogs and sheep, number.....	288,051	393,720	424,753
Cattle, number.....	79,801	110,000	146,367
Pork, beef, lard, tons.....	13,000	18,000	22,000
Butter and cheese, tons.....	1,500	2,500	2,600
Dressed hogs.....	1,200	2,500	5,000

SANDUSKY.—No statement of the imports and exports, coastwise, of Sandusky, has been made or published since 1851. I applied to the collector of the district upon the close of the past year for a statement of the commerce of that port, to which he replied, as follows :

“It would be impossible to furnish you with an accurate statement of imports and exports, coastwise, for this district for 1861, as a large portion of them are not reported to this office. The only way an accurate statement could be obtained would be from the books of the forwarding merchants, and the railroad companies, in the several ports in the district.

"The foreign commerce of the district for the past two years was as follows :

	Imports	Exports.	Total.
1861	41,690	2,282	44,172
1860	32,688	29,047	61,735
Tonnage of the district.....			15,614 tons "

TOLEDO.—The following statement will show the arrivals and clearances, of American and British, to and from American and Canadian ports, at the port of Toledo, for the year 1861, the tonnage of the same, and the number of men employed :

	No. vessels.	Tonnage.	Men.
United States vessels entered	73	16,974	581
Foreign " "	67	12,371	683
Coastwise " "	1,949	535,785	19,715
Total.....	2,089	563,130	20,979
United States vessels cleared	51	11,126	378
Foreign " "	65	12,501	666
Coastwise " "	1,895	552,295	19,456
Total.....	2,011	575,972	20,500

In the amount of breadstuffs received by the various inland channels of trade, at Toledo, and forwarded eastward, chiefly by Lake, Toledo stands next to Chicago. Counting flour in bushels, the receipts have been :

	Bushels.
In 1859.....	7,250,000
In 1860.....	14,501,903
In 1861.....	18,586,347

The grain trade is but one of many branches that go to make up the commerce of Toledo. The Blade's annual statement of the exports and imports of 1860, is as follows :

Exports.....	\$46,727,754
Imports.....	52,243,626

Of this less than thirteen millions consists of flour and grain.

The following table gives some of the leading articles received at Toledo by railroad and canal, and all sent forward by lake and railroad during the year 1861:

Flour, bbls	1,411,456	Hides, lbs.....	1,372,704
Wheat, bushels.....	6,173,000	Cotton, bales.....	3,430
Corn, "	5,276,221	Hogs, dressed, lbs	8,816,283
Other grain, "	79,846	Hogs, live, No	180,080
Pork, barrels	136,087	Cattle, "	73,820
Beef, "	32,313	Sheep, "	32,100
Lard, "	33,050	Staves, "	4,522,130
Oil, "	25,060	Lumber, feet	34,948,038
Whisky, "	159,666	Lath, No.....	7,728,700
Tobacco, hhds.....	7,002	Shingles, ".....	13,891,915
Tobacco, cases	768	Salt, bbls.....	158,659
Wool, lbs.....	1,147,831	Sundries, lbs	77,716,652

RAILROADS.—There is but little change in the condition of the railroads of Ohio, from my last annual report. Three roads—the Marietta and Cincinnati; Pittsburgh, Fort Wayne and Chicago; and the Springfield, Mt. Vernon and Pitts-

burgh—which have been in the hands of Receivers for the past two or three years, have been sold by order of Court. The Marietta and Fort Wayne roads have been reorganized upon a new basis, under the law of 1861, providing for the sale and reorganization of embarrassed and bankrupt roads; and the Springfield and Mt. Vernon road has been purchased by the Cleveland, Columbus and Cincinnati Railroad, and will be operated by that road as a feeder to its main line.

The following is a summary of the reports of the railroads of Ohio, for their last fiscal year of 1860 and '61, as published in the Cincinnati Gazette :

Number of roads in operation.....	33
Total length of lines, in miles.....	4,307
Miles in Ohio.....	3,024
Capital.....	\$77,807,608
Cost of road and equipment.....	153,000,491
Bonded debt.....	78,949,943
Floating “.....	10,515,722
Number of locomotives.....	759
“ baggage cars.....	182
“ passenger “.....	594
“ freight “.....	9,754
“ passengers carried, 1860 and '61.....	4,684,673
“ tons freight “.....	4,235,360
GROSS EARNINGS.	
From passengers.....	\$6,368,136 21
“ freight.....	9,472,174 36
“ mail.....	593,224 27
“ express.....	217,174 73
“ other sources.....	521,575 76
Total earnings.....	17,172,285 53
Operating expenses.....	10,040,717 48
Net earnings....	\$7,131,567 85
The gross earnings were equal to \$4,121 02 per mile, which would make the earnings of the miles within the State (3,024).....	
Operating expenses.....	\$12 474,327 54
Net earnings.....	7,293,769 39
Net earnings.....	\$5,180,558 15

The following is a comparative statement of the gross earnings, expenses, and net earnings of Ohio Railroads, for the past four years :

	Earnings.	Expenses.	Net earnings.
1860 and '61	\$17,172,285	\$10,040,717	\$7,131,568
1859 and '60	15,334,231	9,246,457	6,087,774
1858 and '59	14,441,709	8,292,328	6,149,381
1857 and '58	15,048,903	7,881,520	7,167,383

VIII. DEBT AND TAXATION.

In several of my former reports, I have estimated the whole amount of debt, individual, corporate and commercial. In this there are sufficient data to make it very nearly correct. *Three fourths* the debts due in this State from any source are *ascertained*, and there can be no doubt about them. The State Debt, the Municipality Debt, the Bank Debt, the Record Debt, the Judgment Debts, are all

known. There is nothing left, then, in any way doubtful but the commercial debt and the private, unsecured debt. The latter must necessarily be small, since it is only small sums that are loaned without security. All other debts made by loans are either in the form of mortgages, or judgment liens, or indorsed notes, discounted in banks. All these are ascertained. The private unsecured debt, independent of these, is small. The commercial debt, on the other hand, is large. But, even here, we are not without some data. The wholesale commercial debts of importers cannot exceed more than *half* the imports, and the imports cannot exceed materially the exports. We know, (derived from the actual transportation of the railroads and canals, over which it is all carried), that the export value of domestic produce, and the manufactures of domestic material and labor, does not vary materially from \$60,000,000 per annum. From the fact that many sales are made for cash, and that credit rarely extends beyond six months, *half* the value of exports is quite sufficient to allow for the debt of wholesale merchants. The same amount is quite sufficient for retailers and consumers. Thus we shall not be *over* the mark if we place the entire *commercial* debt of the State, in *ordinary* times, at sixty millions. But these are extraordinary times, and in nothing more than in the rapid and close curtailment of commercial credit, I should not place the commercial debts now at more than half the usual amount; but it will be quite safe to say two-thirds. The commercial debts of all kinds will not be materially different from \$40,000,000. The *private debts* are the only really uncertain debts we have, when we recollect that these are made up almost entirely of—1. Small sums loaned without security; and, 2. The credit given on small sales of personal property, between man and man. We cannot place this class of debts at a very large amount. I estimated it in my last report at \$10,000,000; but this was in deference to judgment of others, who thought that, in some way, the debts of community were larger than the aggregate showed them to be. I think the estimate is too high, but will continue the same estimate in order not to underrate this class of debts. It will be remembered, as I said, that *three-fourths* the entire debts of this State are *ascertained*; and it is only on the retail debts of commerce, and the private debts (unsecured), between man and man, that there is really much margin for variation.

The ascertained and estimated debts of the whole State, and of all corporations and persons, taking the ascertained record and judgment debts of 1861, (vide tables —), and the ascertained municipality and bank debts, will stand thus:

State debt	\$14,250,000
Municipal debts (counties and towns)	9,650,000
Judgment debt (1861)	8,928,166
Recorded mortgages (1861)	29,734,966
Railroad debt	56,000,000
Bank debt	15,500,000
Commercial debt	40,000,000
Private debt	10,000,000
Aggregate	<hr/> \$184,063,132

To this aggregate must be added two other sums, viz: 1. As I have stated in

former reports that the *life of a mortgage* is a small fraction over *two years*, there will always be outstanding *two years* of mortgage debt; and, therefore, we must add to the above the mortgage debt of 1860, which was \$28,738,996. So, also, as I show under the head of Judgments and Liens, (page 49.) the whole amount of money collected on judgments, whether by execution or by payments to attorneys, there must be added *two years* judgments also, that is, the judgments of 1860 must be added also, which were \$9,903,854. We have, then, the aggregate debt of all persons, and all corporations in Ohio, as nearly as it can be possibly ascertained, to be, as follows, viz :

State and municipal debts as above.....	\$23,900,000
Judgment debts of two years, including the whole outstanding judgments....	18,832,020
Recorded mortgages, and liens of two years ..	58,473,962
Railroad debts	56,000,060
Bank and commercial debts.....	55,500,000
Private unsecured debts.....	10,000,000
Aggregate amount of debt	\$222,705,982

There are two items in the above which may possibly have an error. In the counties of Carroll and Stark, there are mortgages recorded to the extent of four millions beyond the average of those counties heretofore. These *may* be railroad mortgages, which are recorded in those counties. In the other case, I have taken off five millions of the railroad debt, which is expunged by the arrangements made with the creditors of two or three companies. I think, however, that in the latter case, there is quite that amount of debt, and probably more, which has been extinguished by arrangement.

In an estimate of the debts which are due, and to be paid from the property of the State, the railroad debt should be subtracted altogether; for it is not due either from private or from public property, but is a lien only on the *roads* themselves; and if the roads were sold, it would be no loss, since the only use can be made of them is to *run them for the public benefit*.

Subtracting the railroad debt from the whole, as above stated, and there remains \$166,705,282. The assessed value of the property of the State is \$880,000,000. The real debt of the State, for which the State, or corporate bodies, or merchants, or individuals, are liable, is just 19 per cent. on the entire amount of its property. The actual amount of money required to pay this is much less; for, it is well known that, in mercantile business, there are three or four persons in succession through whose hands merchandize pass, the payment of one of which will be the payment of the whole. Thus, there are in succession, the wholesale merchant, the retailer, and the consumer, and, intermediate, the banks. The debts of these are estimated in the above table at \$55,500,000. It is quite obvious that \$20,000,000 in the hands of the *consumer*, and paid directly to this object, would pay the whole of them. In the cancellation of debts made at the Bank of Venice, when that bank was the only one, and debts were paid and received by checks—the differences being paid in money—it was found that the bank used but very little money to pay the debts of the whole community. We are, however, less commercial than a great city whose business was entirely commerce, and we

should require a larger proportion of money. Twenty millions of dollars used by the receivers solely for the purpose of paying debts, would, I am satisfied, pay all the pressing debts of society.

2. **TAXATION.**—At this time, when the heavy expenses of the war require heavy taxes, and the minds of statesmen are exercised in devising ways and means to produce revenue, it may be proper to examine *statistically* the question of *how* the revenue may be raised with the least burden to the people? Statistics furnishes accurately all the elements of the problem to be investigated; that is, it points out the resources from which alone revenue *can* be raised, and the extent of them. The great question of taxation is not the amount, but the *mode* of taxation. This has exercised the genius of statesmen in all ages, and is not yet settled upon definite and permanent principles. It is settled, however, in the opinion of candid and intelligent men that, the tax *levied on the luxuries, the vices and the follies* of society, are the *least felt and the least injurious* to the people. Nay, in some cases, they are positively beneficial. Most of these taxes are indirect, and, therefore, in a measure, involuntary. We have an example of the little inconvenience of *indirect* taxes in the large revenues of the United States prior to the rebellion. From 1855 to 1861, the average revenue of the United States was *sixty millions* of dollars per annum. But, aside from the importing merchants, who had the payment to make, before they realized, who felt that they were *paying* anything? In fact, as to any actual payment, we did not pay anything. We raised, however, sixty millions annually, and that is an immense sum, which, if it had been levied by a tax gatherer, would seem heavy.

The problem now presented is to raise *two hundred millions per annum*, in order to keep the government notes and bonds at par, and provide a sinking fund for their redemption. The proportion for Ohio is just about *twenty millions*, and the question is, *how* shall this be raised without becoming a burden to the people? There are *three modes* in which this can be done, and three-fourths this heavy sum raised without the people feeling it a burden. If we look at the question fairly, it becomes no impossible problem. We have immense sources of revenue untouched, and we must first apply to them. 1. We can *save* millions by both a negative and positive legislation. 2. We can raise millions by a tax on vices and luxuries. 3. We can raise a great deal by taxing various new articles and forms of business, which has heretofore escaped. That I may show this clearly, I will proceed to point out the sums and mode of taxation in this State, and the new sums which may be raised.

1. Referring to the amount and mode of taxation heretofore, we find the following results, which I extract from my report of 1859, which was a full and elaborate statement of the whole subject.

"The following table shows the distribution of taxes in the same year :

	In 1847.	In 1850.	In 1855.	In 1859.
State tax.....	\$1,125,727	\$1,413,830	\$2,754,807	\$2,697,918
County taxes.....	1,357,499	1,895,892	2,702,303	3,170,710
Town taxes.....			2,640,775	3,414,990
Professional tax.....	8,569	9,303		
School house and special.....	209,166	754,684		
Delinquencies, etc.....	148,769	165,756	493,781	500,000
Aggregate.....	\$2,842,002	\$4,227,708	\$8,954,511	\$10,083,608

"Making now an analysis of the rates of increase, in each department, we find the following ratios for the twelve years, since 1846, when the new mode of taxation went into effect, viz :

Increase of whole tax	255 per cent.
Increase of State tax	165 "
Increase of local taxes	329 "
Increased amount raised by the State	\$1,872,000
Increased amount raised by county and town.....	5,018,000

"This statement is enough to show that the great increase of taxes, whether in amount or rate, has been caused by the local municipalities, and is mainly beyond the control of the Legislature. There are two points, however, to which the attention of the citizen will be called, viz :

"1. What is the increase of general rate, as it regards property ?

"2. What are the objects on which the increase has been expended ?

"The increase of the aggregate rate has been—

In 1847 (on all property).....	7 mills.
In 1850	9.1 "
In 1855	10.04 "
In 1859 .....	.12 "

"This is certainly a considerable increase, but quite different from the one presented in the former statement. This shows that the taxes have actually increased 72 per cent., instead of 255. Let us now examine the increase in each department :

State tax in 1847.....	2.8 mills.
State tax in 1850.....	3.3 "
State tax in 1855.....	3.2 "
State tax in 1859.....	3.5 "

A very slight increase of State taxation has taken place (in 1859), amounting to one-tenth of a mill.

"Let us now look at the local taxation :

Rate of local taxation in 1847	3.9 mills.
Rate of local taxation in 1850	6.1 "
Rate of local taxation in 1855	6.2 "
Rate of local taxation in 1859	7.7 "

"Here we see, in another form, the great increase of local taxation. It has not only increased 300 per cent. in amount, but 100 per cent. in the rate.

"Let us now deduct from the revenue raised by State taxation, the amount paid to schools, and leave only the amount applied to the State Government, and its incidental expenses. We have this result. In 1847 and 1858 there was no State school fund, and therefore no deduction to be made :

Tax for State purposes in 1847	\$1,125,727
Tax for State purposes in 1850	1,413,830
Tax for State purposes in 1855	1,462,287
Tax for State purposes in 1859	1,645,991

"If it be recollected that the canals have been the last two or three years a charge on the treasury, it will be seen that the amounts raised for State purposes, have been for the last ten years nearly stationary. This will be seen by the following rates :

In 1847	2.8 mills.
In 1850	3 3 "
In 1855	1.7 "
In 1859	1.8 "

"There is, therefore, no citizen of Ohio, who does not pay a less rate, on the valuation of his property in 1859, than he did in 1847, for State purposes, although the actual sum of money raised for such purposes is greater.

"This being the fact, let us inquire on what objects the money raised by taxation, has been expended ?

"By the Auditor's Report, we find them to be these :

Debt and interest	\$1,055,119
Schools, school houses and school libraries	2,740,000
Roads	405,352
Railroads	494,457
Bridges	401,167
Public buildings	276,036
County poor	280,376
County purposes	1,313,327
City, town and borough purposes	1,450,000
Township purposes	280,000
Special taxes and forfeitures	800,000
General State Revenue	590,870

"It will be here seen that after *deducting* the local taxes for schools, roads, railroads, bridges, public buildings and infirmaries, the support of the city, borough, township and county municipalities, cost *five-fold* more than the State government. Of the whole \$10,000,000 raised in this State by taxation, less than 6 per cent. was raised for the general purposes of the State.

"The proportion for general objects stand thus :

Interest and Sinking Fund	10 per cent.
State expenditures	6 "
Schools	28 "
Poor, including townships	4 "
County improvements	16 "
Counties	13 "
City, town and borough	16 per cent."

The whole amount of State expenditures, including the heavy interest on the public debt, is 16 per cent. on the whole amount of taxation. The part raised for *State expenditures* is but 6 per cent. on the whole amount raised. In other

words, the man who pays *one hundred* dollars taxes, pays *six* for the *whole cost operations and expenditures of the State government*. When we analyze this, and look at the truth just as it is, it is quite remarkable. It proves beyond controversy, that the State government of Ohio is a cheap and economical one. It proves that the State has not been too liberal to its State government and officers.

The whole amount of taxes paid by the State were estimated by me in 1859, to be as follows :

In 1857 I estimated the whole amount of taxes paid by the people of Ohio, at \$14,673,298. In the year 1859 the revenues collected by the General Government on imported goods were about \$50,000,000, of which at least one-tenth were paid by the people of Ohio. The amount and distribution of taxes paid in 1259, were :

For State purposes, including the interest on the Public Debt and Sinking Fund	\$1,645,989
On school purposes	2,740,000
For local purposes of all kinds (exclusive of schools)	5,669,011
Paid to the General Government by Custom House Duties	5,000,000
Paid by Ohio in 1859	\$15,054,080

Of this, *one-third* was paid to the National Government by indirect taxes ; more than one-third was raised by local authorities ; and of the whole amount (direct and indirect), but *four per cent.* was raised for the State Government !

2. Let us now turn to the problem before us, *how to raise twenty millions of dollars per annum* for the National Government. In solving this problem, we must consider the machinery of the National Government and of the State, for the time being, as the same ; that is, whatever is raised by one is to be subducted from what is to be raised by the other. 1. On page 25 of this report, I exhibited the fact that if the law could *restrain the animals of every man to his own premises*, the *saving* in the cost of fences annually would be two millions of dollars. This is not money raised, but it enables the people to pay that tax in another way. This comes under the head of saving. 2. In my report for 1858, I showed that the whisky distilled in Ohio, for the year preceding, was 39,029,594 gallons (*vide* page 35, report for 1858), and the number of distilleries 160. The quantity distilled last year was about 30,000,000 gallons, and may be still further diminished, but not much, since the profits of distilling have again increased—whisky being 5 cents a gallon higher than it was a few months since. An excise duty on thirty millions of gallons of distilled liquors, at 10 cents, would give \$3,000,000, or of 15 cents, would produce \$4,500,000. A duty of 15 cents would diminish the production to some extent, though not very great, since in the *consumption* of liquors, the price they are sold at is *treble* that of their cost. A duty of 15 cents added to the present price would make whisky but 31 cents a gallon—a price which it bore in 1854 and 1855, without diminishing the consumption. It is safe to say that 15 cents excise duty may be raised on 25,000,000 of gallons of liquor. This gives \$3,750,000. 3 The new duties on coffee, teas and sugar, together with the usual articles of imports, will bring the custom-house duties paid by Ohio

(indirectly) up to the amount I formerly estimated them, viz : \$5,000,000 per annum. 4. The school-houses, bridges, roads, and public buildings (which have heretofore consumed immense sums of money), are now completed ; and the municipalities may, therefore, be *restrained to half* the expenditures of the last few years—which *saves* \$2,500,000 per annum. 5. There are various and numerous subjects of taxation which have never been touched, but which are taxed in so economical a State as Pennsylvania, and from time immemorial have been taxed in England. Among these are suits at law, recorded instruments, taverns, auctions, retailers' licenses, collateral inheritances, corporation stocks, dogs, carriages, watches, &c. Some of these articles are now taxed as part of personal property, but a specific tax is far better, since nothing is more certain than that all personal property is much underrated. Our present system of taxation is *apparently* very fair, and it is founded on a correct general principle ; but the *practical result* is to throw the *burden* of taxation on *lands and houses*. There can be little doubt that most articles of *luxury*, all of *vice*, and many classes of business which are not necessary to the general purposes of society—such as litigation, and auctions—should be taxed *specifically*. The thing itself should be taxed, and not thrown into a general table of miscellaneous goods. 6. Railroad passengers will bear a small tax, which in the aggregate will be considerable. *Incomes* the Government has already taxed. If there were any certain way of arriving at incomes, this tax would be very productive ; but, like most personal property, many incomes will escape, and the expectations of Government will hardly be realized.

Taking the statements and principles above laid down as a basis, and we shall have the following results, viz :

1. Custom House duties, including the tax on coffee, tea and sugar (the Ohio proportion).....	\$5,000,000
2. Excise on all distilled liquors.....	3,750,000
3. Income tax, provided by law.....	500,000
4. Suits at law (30,000).....	150,000
5. Recorded instruments, viz : 60,000 deeds ; 23,000 mortgages ; and 5,000 wills, and administrations.....	100,000
6. Tax on taverns.....	200,000
7. " corporations.....	300,000
8. " auctions.....	100,000
9. " collateral inheritances.....	100,000
10. " pleasure carriages (30,000).....	150,000
11. " other vehicles.....	200,000
12. " pianos.....	50,000
13. " watches.....	50,000
14. " dogs.....	50,000
15. " railroad passengers, one-half cent per mile.....	500,000
16. Saved by reduction of local taxes.....	3,000,000
17. " " fences.....	2,000,000
Aggregate.....	\$16,200,000

Of this, there will be \$11,200,000 actually raised, or equivalent in the loyal States to \$112,000,000 per annum. The \$5,000,000 *saved* (as I claim) will not be *money*, but it will enable the people to bear that tax, *without increasing the aggregate amount*. There remains, therefore, only \$3,800,000, which is really, except what is above stated, a new tax. If this be raised, as heretofore, by a direct tax

on property—which is but 4 mills on the valuation—it will not be very burdensome. If the whole amount to which I referred above, viz : \$3,800,000 (which is beyond the actual amount raised as above), be raised by direct tax, it will be 9 mills; but of this nearly 4 mills were local taxes, now supposed to be taken off. From 5 to 6 mills additional tax, with the specific taxes above, will raise the whole twenty millions, assumed to be required; and this will not be seriously felt.

I have given the facts in relation to this important matter, and make no suggestion, beyond their exhibition.

IX. SOCIAL STATISTICS.

1. THE PHYSICAL MAN OF OHIO.—In a time of war, one of the most interesting questions which can arise is the physical strength of a people to carry on war. It is no contradiction to the general principle of unity in the human species, to say that the physical development of men, in different climates, and under different circumstances, is widely different. The Bushman of South Africa, the Negrito of the New Hebrides, or the Indian of South America, can by no possibility be made equal in strength to the European races, unless climate, regimen and discipline be first changed, and ages of a new physical experience to the race be undergone. The differences in these marked varieties we can readily see, but there are other minor differences, not at first plainly visible, which are yet very important, and in a million of men would make a vast difference in their physical strength. The Belgian, and Rhenish German is inferior in stature to the Englishman, and the Englishman to the Scotch Highlander. The differences in stature between some of the European races, are as great as that between the average heights of men and women; a difference which in itself, if there were no other, would make a difference in the intrinsic value of labor. The subject of human physical development is, therefore, one of very great importance. An inquiry into it is one of the most interesting branches of the modern science of ethnology. It is one, too, of practical importance, for it is now clearly ascertained that the human strength may be greatly increased by systematic regimen; that the body may be improved in health and development by one class of influences, and deteriorated by another; and finally, that whole races of men may be sensibly changed, by the changes in climate and institutions. Physiology has called our attention to the physical laws of inter-marriages; ethnology has exhibited the characteristic differences of races. Christian Missions have exhibited the influence of moral laws on health and life; and even English pugilism has made an important contribution to the science of man, by demonstrating how very much may be done by diet, exercise, and regimen, in increasing and strengthening the physical development. Indeed, it would have been well for the numerous class of chronic patients, if physicians and nurses had taken lessons in the school of English training.

The subject is far too wide for consideration here. I would merely call attention to the small branch, in which we know something of ourselves. Since it is

impossible for a people of inferior physical development to become really great, it is quite interesting to know at what point in the scale of that development we stand. What rank will the people of this great Valley of Ohio—so rich in material wealth—hereafter hold in the scale of physical humanity? To answer that question is a problem at once difficult and complicated. Its investigation requires that man should be physically subjected to an examination, as rigid, as minute, and as unfeeling, as that with which the naturalist dissects an insect under the microscope. This is the work of science, and of time, and patience.

Some years since, aided by Professor Henry, of the Smithsonian Institution, I commenced an inquiry into the physical characteristics of the Anglo-American. Numerous measurements throughout the United States have been made, and recently Professor Henry has multiplied these by the measurement of many thousand men in the army of the Potomac. I have myself made tables comprehending thousands of persons, in all classes of life. In order to know something of what the physical man of Ohio is, I shall give that part of the results only which relate to the people of this State, and its immediate vicinity. I may here remark, that there is far less variety in the races of people who inhabit the United State, than many have imagined. In fact, there is very little. The United States have been peopled almost exclusively by English, Scotch, Irish, Hollander, and German. Among these are but two real varieties of race: the German (Gothic), and Celtic. That part of the Irish and Scotch who descended from the ancient inhabitants, are Celtic; and among all the rest there is very little difference in stock. Our proper title is Anglo-American; in other words, mainly the Europo Gothic stock. The physical development of man, in any one of the States, is very nearly that of the whole. I will here give several tabular descriptions of persons in different parts of Ohio.

The following tables of the HEIGHTS, WEIGHTS, CIRCUMFERENCE ROUND THE CHEST, COMPLEXION, COLOR OF THE HAIR, and COLOR OF THE EYES, of two hundred and thirty-nine native Americans, were taken in the counties of Athens, Butler, Highland, Montgomery, and Washington, by Messrs. A. B. Walker, Isaac A. Ogden, R. P. Brown, Eosworth and Mills. The persons were taken indiscriminately, and the measurements are reliable:

County.	Number.	Height.	Circumference.	Complexion.	Hair.	Eyes.	Weight.
		<i>Inches</i>	<i>Inches.</i>				<i>Lbs.</i>
Athens.....	119	69.6	37 71	{ Light, 77 Dark, 39	{ Dark, 45 Light, 66	{ Dark, 32 Light, 96	{ 154
Butler....	42	70.3	35.94	{ Light, 25 Dark, 17	{ Dark, 27 Light, 15	{ Dark, 29 Light, 13	{ 168
Highland....	21	71.5	41.	{ Light, 21 Dark, ..	{ Light, 15 Dark, 6	{ Light, 20 Dark, 1	{ 182
Montgomery.....	33	70.46	35.45	.....	.....	.....	165.1
Washington.....	24	71.	40.	{ Light, 13 Dark, 11	{ Dark, 11 Light, 13	{ Dark, 14 Light, 10	{ 176
Average.....	.....	70.57	38 02	.....	.....	.....	.....
Aggregate.....	239	.....	.....	{ Light, 136 Dark, 67	{ Light, 109 Dark, 89	{ Light, 139 Dark, 76	{ 169

Remarks.—The following are the deductions which may be made from this table:

1. The average height of men in the interior of Ohio, is 5 feet 10½ inches. Some other tables, which will be found on following pages, will show that this is slightly too high. The average for the State is just about 5 feet 10 inches. We must make here, however, a slight correction. Most (though not all) of these men were measured with shoes or boots on. If we make this deduction, and take the average on large numbers of men, we shall find that 5 feet 9½ inches is the natural height of the present men of Ohio. In order to contrast this stature of Ohio men, I give the following table of European heights, compared with our own :

1. Average height of Belgian men: taken from Quetelet's work "Sur l'Homme," for the years 1823-1827 inclusive, and comprehending 3,500 individuals ... 5 feet 5½ inches.
2. Heights of recruits enlisted in the London district (England) for 1838-'9: taken from Johnson's National Atlas, and comprehending 979 individuals..... 5 feet 6 9-10 inches.
3. Heights of eleven Highland regiments: taken from Johnson's National Atlas, and averaged..... 5 feet 7 9-10 inches.

It thus appears that the *average height* of Ohio men in the above table is *four inches* above that of the Belgians, *two and a half inches* above that of English recruits, and *one and a half inch* above that of the Scotch Highlanders.

2. The MAXIMUM heights of men in the above tables show that there were *at and above six feet in height*—

In Athens county, of 119.....	21
In Butler county, of 42.....	11
In Highland county, of 21.....	9
In Montgomery county, of 33.....	8
In Washington county, of 24.....	10

Out of two hundred and thirty-nine individuals, fifty-nine were six feet and above in height. Of these—

1 was 6 feet 4 inches.
1 was 6 feet 3½ inches.
5 were 6 feet 3 inches.
3 were 6 feet 2½ inches.
6 were 6 feet 2 inches.
2 were 6 feet 1½ inch.
11 were 6 feet 1 inch.
30 were 6 feet.

Thus about one-fourth of all the persons included in those taken from these counties were six feet and upwards in height. I may here remark that, according to my observation, more tall and stout men may be found in the upper valley of Ohio than among any other people.

3. The measurement round the chest is important in ascertaining the strength and stability of the human frame. The following is the only comparison I have been able to make in regard to this element :

Men of Ohio.....	Round the chest.....	38.02 inches.
English (London recruits).....	“ “	32.06 “
Scotch Highlanders	“ “	39 7 “

It would seem from this that the Scotch Highlanders are stouter in the chest than Americans, and it is probably true ; though equally probable that no other European race is.

4. What we call *fair complexion* predominates among the people of Ohio. There are very few of the olive, brunette, or dark complexion. The great majority are light or sanguine; and many of those called dark would not be so among those nations—like the Spanish—where dark complexions prevail.

5. The *eyes* are light in the proportion of 3 to 2. In this we place all blue and grey eyes in the light class, the black and hazel in the dark.

6. The *hair* is the only feature among Americans, and especially in Ohio, which approaches the characteristics of the dark nations. Even in this the majority have what may be fairly called light hair, including most of the brown-haired. Of the whole number set down in the above table, 63 were black. The remainder were chiefly brown, with a few auburn or sandy.

7. The *weight* given above—an average of 169 pounds—is very heavy. The weight of the naked man would be but 10 pounds less. But men are everywhere weighed with their clothes, so that, in making a comparison, this is unimportant.

In order that we may verify these physical descriptions on a large scale, I subjoin some other tables. The following is a table of the height, weight, eyes and hair of 321 native Americans in five companies of Kennett's regiment (cavalry) of Ohio volunteers:

Companies.	Heights.	Weight.	Eyes.	Hair.	Average age.
Company A.....70	5 feet 8 inches.	154 lbs.	{Light...35 Dark...35	{Light.. 49 Dark...21	24
“ E.....10	5 “ 9 “	142 “	{Light... 7 Dark... 3	{Light... 6 Dark... 4	
“ F.... 80	5 “ 9 “	157 “	{Light.. 57 Dark...23	{Light...52 Dark...26	
“ G.....69	5 “ 9 “	148 “	{Light...45 Dark...24	{Light...25 Dark...44	
“ H.....92	5 “ 8 “	141 “	{Light...58 Dark...34	{Light...58 Dark...34	
5 companies....321	5 feet 8 3-5 in.	148 lbs.	{Light...202 Dark...119	{Light...190 Dark...129	

This table presents a little less average of both height and weight, but for this there is sufficient reason in the fact that many of the recruits in the volunteer service are so young that they *have not attained their full growth*, while in measuring farmers, mechanics, miners, &c, full-grown men, of full age, only were taken. In the companies above taken, there were fourteen *under* eighteen years, and three times as many *only* eighteen. None of these had attained full weight, and few their full height. The average of the whole number was perceptibly diminished in this way. It will be seen that the light hair and eyes still predominate.

The following table of measurements in different villages of Ohio was taken by the agents of the Smithsonian Institution, under the direction of Professor Henry:

Places.	Number	Heights.	Weight.	Average ages.
Bowling Green	15	5 feet $9\frac{3}{8}$ in	154 lbs.	36 years.
New Lisbon.....	24	5 " 10 "	172 "	32 "
Belle Centre.....	24	5 " 11 "	168 "	30 "
Mount Pleasant.....	24	5 " 8 "	153 "	35 "
Ripley	24	5 " 10 "	161 "	40 "
Stark county	10	5 " 11 "	160 "	25 "
Steubenville.....	23	5 " 8 "	147 "	22 "
Troy	24	5 " $8\frac{3}{4}$ "	155 "	33 "
Kelley's Island	24	5 " $8\frac{1}{8}$ "	142 "	34 "
College Hill.....	22	5 " $9\frac{1}{4}$ "	154 "	37 "
Bellefontaine	24	5 " $9\frac{1}{2}$ "	163 $\frac{1}{2}$ "	32 "
Eleven places	238	5 feet $9\frac{3}{8}$ in.	157 lbs.	32 years.

There is no perceptible difference between the *heights* in this table and in the first one, after making the allowances there spoken of. The average height is, however, *one inch* greater than in that of Kennett's regiment. The reason is, doubtless, what I have mentioned—the youth and immaturity of many of the volunteers. The *weight* is less than in that of the first table, but still greater than that of Kennett's regiment. These being the general characteristics of human physical development in Ohio, I shall proceed to—

2. NUMBER CAPABLE OF BEARING ARMS.—The old rule of the laws regulating the militia service was to require only those between the ages of 18 and 45 to bear arms. Undoubtedly this includes those who would be most serviceable, and there are few men over fifty years who are really capable of hard service in the field. In the exigencies of war, men of all ages may be called out; and the best mode of ascertaining those capable of bearing arms is to take the whole number of men over 18 years of age, and then deducting from them those of extreme age and a certain proportion of the infirm. The censuses of the United States have determined with exactness the number of these at each period of life, and this is an invariable ratio. Applying this proportion to the population of Ohio in 1860, and we have these results:

1. The proportion of males *over* 18 years is 49 per cent.
2. The whole number of *males* in Ohio is 1,169,799.
3. The number of males *over* 18 years of age—49 per cent. of the whole—is 573,202.

The proportion of *males* over 70 years of age to the whole male population is $4\frac{1}{2}$ per cent., which, being deducted from the last number, leaves (able-bodied) 523,566. The proportion of those which may be kept in military service, without seriously *impairing the industry of the State*, is the important question in raising troops for the war. Until there is such a reduction of labor as will reduce the amount of agricultural and manufacturing products, the draft on the male population does not seriously injure the prosperity of the State. In Europe, about *one-fiftieth* part of the whole population are *in the regular army in time of peace*; and this is not a draft on the labor of one, two, or three years, but a *continuous draft* on the *industry* of a State. For a war of two or three years there is no doubt three-

fold that number may be maintained, and industry not materially reduced ; but, when it becomes continuous, it is exhausting, and society must decline under it. This was the case with France in the wars of Napoleon, and it was the *exhaustion* of France, rather than the snows of Russia, which ultimately caused his downfall. When Napoleon returned from Moscow he found France exhausted of men, and he was unable to raise new armies on a large scale. Could he have done what he could ten years before—raise half a million of men in a short time—there is very little doubt the allies would have been driven back, and Napoleon have made a favorable peace. War is exhausting, but in nothing so much as of human strength. For every soldier who dies in battle, there are ten who sink beneath typhoid, dysentery, and pneumonia. Looking to the industry of Ohio, the increase of agricultural machinery, the number of those who can be spared in large towns, and the immigration, I think it safe to say that *one fifth* of the able-bodied men of Ohio can be spared for the army for two or three years. Beyond that period, so large a proportion would undoubtedly tell on the industry of the State. The surplus crops would be gradually exhausted, and thus *the wealth of the State be diminished*. This wealth—the accumulation of labor—is the basis of taxation, and no taxes would be felt half so severely as the exhaustion of labor. So long as we can maintain an annual surplus of crops, we really accumulate wealth, and thus we are able to bear the heaviest taxes. *One fifth* the able-bodied men of Ohio is 114,800 men. We have now less than 85,000 *actually in the field* ; so that we have not yet arrived at the point when the draft of men becomes exhaustive. For a period of two or three years we could spare 30,000 more, and a similar proportion for the loyal population of the United States would produce an army of a million of men in arms—a number greater than will probably be ever needed in this generation.

2. MARRIAGES—There are quite a number of marriages in Ohio by *banns*—that is, notice in church without license. I have been able to procure those in some of the more populous counties, so that I have now very nearly an accurate statement of the number of marriages for the past year. There were 925 marriages by banns and 21,326 by license—making an aggregate of 22,251, which is 1 in 105, and the highest ratio among civilized nations. The number of marriages in the last three years were as follows, viz :

In 1859	22,671
In 1860	23,106
In 1861	22,251

There is evidently some diminution of marriages, growing out of the extraordinary circumstances in which the country is placed. This will continue till the return of peace and prosperity.

3 NATURALIZATIONS—The whole number of naturalizations were 11,233. Of these, 5,949 were Germans, 2,108 were Irish, and the residue were English, Welch, Scotch, French, &c. Of the whole number, 8,970 were naturalized in the Probate Courts, and 2,263 in the Courts of Common Pleas. In 1860, there were naturalized 10,479 ; but, as the statistical year terminates on the 1st of July, a

large part of the excited Presidential canvass came within the present year of my report for 1860-'61, and thus the number has been increased, although the naturalizations of the previous year had been very large. The number of naturalizations in the last three years were :

In the year ending July 1, 1859	8,993
“ “ “ 1, 1860	10,479
“ “ “ 1, 1861	11,233
Total for three years.....	30,705

This is an average of 10,000 a year, and, since the proportion of voters to population in Ohio is about 1 in 6, this indicates an annual increase of foreign-born persons equal to 60,000. It must be here said, however, that in the year ending July 1, 1858, there were but half the number of naturalizations for the year 1859.

The birth places of foreign-born citizens, as far as known, were for the last four years :

Germans.....	19,159
Irish.....	6,289
Other places.....	7,021

Of these born in “other places,” more than half came from Great Britain, many of them Welch, who have gone into the mining districts. In Ohio, among the foreign immigrants, the Germans largely predominate. There are three times the number of Germans naturalized than there are Irish, and more than double all who come from Great Britain, including the Irish. The Prussians are included among the Germans. Notwithstanding the difference of language, and the publication of German papers, most of the Germans have acquired the American tongue with great facility. I may add, simply, as a *fact*, that the Germans have proved among the most frugal, industrious and intelligent population of this State.

4. **CRIMES.**—The subject of crime has been fully treated of in my reports, and more particularly in the last, that for 1860. I need not repeat the comparisons made. I would merely say that, in time of peace, there is a remarkable uniformity in the number of crimes which are committed from year to year. The principal variation is in the class called “liquor cases.” As the offense of “selling liquor” in a way not authorized by law is simply a statutory offense, and one which depends much upon the state of public opinion, the offenses under this head which are *indicted* is quite variable. In some particular counties, and in particular seasons, the popular sentiment in favor of prosecuting these offenses is strong and determined, and in others lukewarm. There has been, therefore, in different years, a great variation in the number of cases which came under this head. The great mass of crimes, however, keep a very exact proportion to the population; and, unless the *moral condition* of society is changed, will continue to do so. Each year will reproduce the same amount of folly, immorality, and physical excitement; and from this again the same amount of crime. There is no department of statistics which has brought out more remarkable facts, or more valuable results, than this. It would scarcely be credible, if it were not absolutely proved by the statistics of France, Germany, and the United States, that a community having once sub-

jected itself to certain vicious temptations and influences, must henceforth produce and endure the same annual amount of crime, suffering and injury against the happiness of society, in spite of all laws and all the machinery of restraint which can be invented or enforced. The *condition* of society being the same, the same crimes must result. But it is a most mischievous fallacy to suppose that, *therefore*, these results cannot be changed, and there is an inscrutable fate reproducing the same social evils, without any human power to change results. They will return while the *social condition* remains the same ; but there is no necessity that it should. Society has the power of self-reform ; it has the power to take away temptation ; to reward virtue ; to encourage industry, and to restrain vice : it has the power to defend the individual against social wrongs and temptations, which impair his peace and prosperity, quite as much as to embody armies and defend property. For what other purpose was government formed or laws enacted ?

The number of crimes for the year ending July 1, 1861, were as follows, viz :

Number of indictments.....	2,827
Number of convictions	1,374
Crimes against person	724
Crimes against property	597
Crimes against society (statutory offences)	1,423

There were about 500 *less* indictments in this year than in the year before, but of these 460 were for the class of *statutory offenses*, which, as I have already said, is a *variable* quantity. But in the classes of crimes *against person and property* there was little difference. The sum of these were :

In 1860.....	1,467
In 1861.....	1,321

The crimes of *violence* committed in 1860-'61 were rather *greater* than in the previous year, and I shall be surprised if they are not greater yet in the year following.

The number of crimes, their classification, and of convictions, for the last five years, were as follows :

In 1857.....	3,236
In 1858.....	3,533
In 1859.....	3,493
In 1860.....	3,362
In 1861.....	2,827

The reduction in 1861 is chiefly owing to a temporary relaxation in the number of liquor cases. The average of the above is 3,290 ; and it will be seen that the annual variation from this scarcely exceeds 10 per cent. The crimes against property have diminished in a small degree, but the crimes against person keep up their full average.

5. VIOLENT DEATHS.—In immediate connection with crimes is the subject of violent deaths, of which a large part are crimes. The number of violent deaths returned for 66 counties were 621, or 100 more than were returned in 62 counties last year. The remaining are small ones, without large towns, so that probably

but few more would have been found if they had been returned. The number of murders (homicides) were 12 less; the number of suicides were 16 more; and the number of casualties 94 more. In the latter were not included the casualties from the accident to a train on the Marietta Railroad, carrying volunteers. The coroner said he was unable to ascertain the number, no inquest having been held.

The crime of *suicide* has been increasing in this State of late years, mainly from such disturbing causes as the commercial revulsion of 1857 and the war of 1861. It is more than probable that the next year, or rather the current year, will find the number of suicides largely increased. *Casualties* also have increased largely. In the year past there has been a much greater number of railroad accidents than in that preceding. In some cases these accidents have been caused by defects in the road, but in most cases casualties of this sort are the direct consequences of individual *carelessness* in standing upon the road, getting on or off the cars *when in motion*, &c. I have known several instances of this kind, in every one of which (except one) death has been caused by the sufferer's own fault.

In regard to *homicides* and crimes of violence, it is a reproach to our civilization that most of them are caused, directly or indirectly, by *intemperance*, and that this intemperance results mainly from the daily temptations which the State permits and endures. I state it merely as a fact.

In regard to *inquests*, it will be noticed that there are many more violent deaths than there are inquests. In other words, due inquiry is not made in all cases into the causes of unusual and extraordinary deaths. In my opinion, justice, sound morals and the police of society require that this should be more strictly attended to. The duties of coroner are too frequently neglected, and the law on this subject is defective.

6. JUDGMENTS AT LAW.—This is an important part of the social machinery; a consequence of unrestricted credit, by which many persons become embarrassed in business before they are themselves aware of it. When the debtor cannot meet his engagements, and the creditor will not defer them, the law steps in to give aid by the process of force. This consists almost altogether in three steps: 1. The *judgment*, which is simply an official record that the debtor owes the debt; 2. The *lien*, which makes this judgment, like a mortgage, a lien on his real estate, according to its date; 3. The *execution*, by which property of any sort belonging to the debtor is seized and sold to pay the debt. Statistically, the results of these steps are by no means equivalents. The amount of money collected by *forcible* process is only about *one-fifth* of that for which judgment is rendered. The number of *civil suits* commenced in courts of record, for three years, were as follows, viz:

In 1857.....	29,720
In 1860.....	25,147
In 1861.....	22,604
Average.....	25,820 annually

The number of judgments rendered in five years were as follows, viz :

In 1857.....	17,500
In 1858.....	18,080
In 1859.....	17,054
In 1860.....	19,938
In 1861.....	19,222
Average.....	18,555 annually.

The amount of money for which judgments were rendered in four years was as follows, viz :

In 1857.....	\$7,316,000
In 1858.....	8,716,518
In 1859.....	9,776,294
In 1860.....	9,903,854
Average.....	\$8,928,166.

These averages vary so little from the maximum and minimum year, that they may be taken as fair expressions of the amount and results of litigation in this State. The general expressions are these :

Average number of suits in courts of record.....	25,820
Average number of judgments in courts of record.....	18,555
Average amount of money represented by the judgments.....	\$8,928,166
Average amount of each judgment.....	\$460 00

In 1858 and 1859 I procured the amounts of money collected *on execution*, and found it amounted to \$1,600,000 per annum. It was, therefore, less than 20 per cent. on the amount of these judgments. The aggregate operations of five years of litigation in regard to the collection of money amounts to this :

Whole number of suits in five years.....	129,100
Whole number of judgments in five years.....	91,775
Amount of money represented by judgments.....	\$41,640,830
Amount of money collected.....	8,000,000

The cost of writs, lawyers and sheriffs was not less than \$3,000,000. The general result of collecting money by force is the collection of 20 per cent. of the original debt, at the cost of 8 per cent. on the whole amount due, so far as writs of *execution* go. But undoubtedly there has been much more collected on the judgments, many of which are obtained by consent, and on a large number either the whole or part has been paid to the attorneys without execution. Perhaps it will be quite a large estimate, however, to say that 60 per cent. are ever collected ; and on the additional collection, fees and commissions will amount to as much more cost as that allowed above.

7. ADMINISTRATION OF ESTATES.—The number of wills filed in 1861 was 1,767, and the number of letters of administration (*vide* Table 18) was 2,849. Both these numbers are very near the average of the last five years. The largest number of wills filed in one year was 2,013, and the largest number of administrations 3,308. The smallest number of wills was 1,466, and the smallest number of administrations 2,455. The greatest aggregate of both was 4,772, and the smallest 4,146. The aggregate of this year is 4,616, very nearly the average. On an average, 48,000 persons die in Ohio within a year, of whom 24,500 are

adults; and of these, again, about 10,000 are heads of families. Assuming these proportions, there are less than half the heads of families upon whose death there is any legal process to settle the estate. I account for this by these facts:

1. There are very many families of laborers and poor people in whom there is *no estate, properly speaking*, but the few movables they have pass to the remaining member of the family, without any legal steps. 2. There are other families, especially among farmers, in which there is no estate of any value, except land, on which they live. This passes at once to the children, as joint heirs; the widow's dower is set off by agreement, and there is no need of any other step. The only legal proceedings which result from the death of the owner is a writ of partition, when it cannot be done by mutual agreement. It will be seen, however, that there is, as in other classes of events which seem at first to be very variable, a great *uniformity* in the annual number of wills and administrations. This only indicates that the *proportions* of the social condition remain very nearly the same in any small number of years. In the course of a century we should find the proportions of the social condition changing, and, with them, the proportions of wills and administrations. As the number of independent estates increase or diminish, so will the legal steps for the settlement of estates.

8. NEW STRUCTURES AND THEIR VALUE.—The number of new structures erected in a community is, in some degree, a measure of its physical and industrial progress. Not only are repairs and improvements necessary for the maintenance of social comfort; but, as population and wealth increases, new and better buildings are erected. In the older farms of Ohio, there is scarcely one in which two and sometimes three classes of houses have not been erected—the last one being a large, permanent brick building. This marks the progress of industry, of cultivation, wealth, and taste. I have reported the new structures in each of my reports, and so far as I know, it has been done in no other State. The new structures and value for the last four years (*vide* Table for 1860), have been as follows, viz:

	Number.	Value.
In 1858.....	10,458	\$5,612,054
" 1859.....	7,812	4,972,645
" 1860.....	8,100	3,625,513
" 1861.....	9,831	4,463,042
Average.....	9,060	\$4,800,000

Rather more than two-thirds of the whole number are dwelling-houses and stores. In the whole four years above stated, there have been erected *twenty five thousand dwelling-houses and stores*. At the same rate, there would be an increase of 62,000 in ten years. At the *density of habitation* in this State—which is very nearly 6 to 1—this indicates an increase of 372,000 persons, which corresponds most remarkably with the actual increase, which is 360,000 by the census.

9. BENEVOLENT INSTITUTIONS, AND THE DEPENDENT CLASSES.—In the year 1858, under a direct resolution of the Legislature, I reported the number and condition of the infirm, or dependent classes. As only a short period has since elapsed, I

have taken no measures to renew that class of inquiries. With very slight additions for the progress of population in three years, the following are the results :

Number of lunatics.....	2,000
“ idiotic.....	2,100
“ deaf and dumb.....	1,200
“ blind.....	1,000
“ prisoners (exclusive of penitentiary).....	400
“ in benevolent asylums, houses of refuge, &c., not supported by the State	1,200
“ of paupers (permanent or temporary).....	16,000
“ offenders arrested or tried each year.....	12,000
Aggregate.....	35,900

In cases of commercial disaster, and probably in the current year of war, this number will be increased to more than 40,000. It is this class which, more than any other, indicates both the state of morals and of social stability. There are now in Ohio 1 in 70 of its population who belong to the *infirm or dependent classes*. It is a large number in fact; but, relatively to other nations, a small one. It is enough, however, to indicate very clearly that society, even in this free country, is not yet relieved from the burden which sin and imperfection have imposed upon suffering humanity; and the duties which are yet due, by the strong and the wealthy, to those who are thus dependent and suffering.

10. EDUCATION AND RELIGION.—In my report for 1859, I gave a full exhibit, not merely of the public education, but of all the universities, academies, seminaries, private and parochial schools in this State. I also gave the course of education, the number of professors, pupils, &c., and also the kind and number of professional schools, and their results. This is the only full exhibit of education ever made in this State. It was complete, and showed that every child or youth in the State, under twenty-one years of age, had ample means of a good and useful education.

In the same report (1859) was given the number, cost and accommodations of the church buildings, derived from the U. S. censuses and the State assessment for taxation. In that exhibit it appeared that there were accommodations of public worship for every person in the State, who was able to attend. It is not necessary to repeat that exhibit.

I close this report with the statement, that no State in this country—and except in the matter of births and deaths, which we have not yet provided for—no State of Europe has, I believe, so full and correct an exhibit of its elements and movements, whether physical, intellectual, commercial, industrial, or social, as the State of Ohio. It is an exhibit very honorable to itself; and I believe all liberal and candid minds will think it no less honorable to have created and sustained a Bureau of Statistics for such a purpose.

OBSERVATIONS.—The thermometer ranged, during the year, between five degrees and one hundred degrees above zero. The average temperature for the year is fifty-four degrees.

The period of frost was from October 12th, 1860, to May 2d, 1861. There were heavy frosts on the 7th, 11th, 13th, 14th and 15th of November.

The variation of the barometer during December was 1.23 inches—a very unusual amount.

The whole depth of snow was 8.6 inches—a less amount than fell during a single snow-storm of 1859.

The depth of rain was $3\frac{1}{4}$ feet.

January was unusually wet. August was remarkable for heavy rains. On the 21st there fell, in two hours, 3.35 inches, the heaviest rain, at this point, on record. There were several violent storms during the month of May, also in June, accompanied by hail. On the 12th of July hail-stones fell as large as cherries.

GEORGE W. HARPER, A. M.,

Cincinnati Woodward H. School.

TABLE II—METEOROLOGY OF MEDINA COUNTY.

Meteorological Observations for the year ending October 31, 1861, taken near Medina, Ohio, by William P. Clarke, A. M. Latitude 41 deg. 7 min., longitude 81 deg. 47 min. west. Height above the sea 1,255 feet.

Month.	BAROMETER.				TEMPERATURE.				Rain and melted snow.	Snow.	Prevailing Winds.	Remarks.
	Max.	Min.	Mean.	Range.	Max.	Min.	Mean.	Range.				
1860.										inches.		
November.....	28.849	27.954	28.507	.895	69.	3	38.	66.	1.690	5.	S. W. & N. W.	Rain or snow 12 days.
December.....	29.132	28.104	28.674	1.028	41.	5.	25.5	36.	2.016	15.8	S. W. & N. W.	" " 16 "
1861.												
January.....	29.113	28.151	28.621	.962	44.	3.	26.3	41.	1.584	7.6	S. W. & N. W.	" " 19 "
February.....	28.991	28.121	28.528	.870	66	-9.5	33.6	75.5	1.568	5.0	S. W. & N. W.	" " 15 "
March.....	28.967	28.148	28.592	.819	70.5	6.5	35.7	64.	1.994	8.6	S. W. & N. W.	" " 21 "
April.....	28.837	28.135	28.509	.722	76	32.	49.	44.	4.011	1.1	S. W. & N. W.	" " 16 "
May.....	28.904	27.96	28.514	.943	75.	31.	53.9	44.	3.137	.....	N. W. & S. E.	" " 16 "
June.....	28.767	28.343	28.583	.421	82.5	50.	68.	32.5	1.988	.....	S. W. & N. W.	" " 12 "
July.....	28.813	28.336	28.591	.477	87.5	55.	68.7	32.5	3.340	.....	S. W. & N. W.	" " 11 "
August.....	28.831	28.441	28.638	.390	92.5	57.	70.7	35.5	2.564	.....	N. E. & S. W.	" " 10 "
September.....	28.998	28.260	28.649	.738	81.5	53.	62.8	28.5	2.157	.....	S. W. & N. W.	" " 12 "
October.....	28.935	28.117	28.611	.818	74.	32.	53.1	42.	2.125	.....	S. W. & S. E.	" " 15 "
Means and totals	28.929	28.197	28.547	.757	71.6	26.5	49.2	45.1	28.174	43.1		175 days.

February 8th was the coldest day, the mean temperature being two degrees and two-tenths.

August 2d was the hottest day, the mean temperature being eighty-four degrees and three-tenths.

The first frost in the autumn of 1861 was on the morning of September 29th. Frost killed vines on the morning of October 28th. Range of thermometer during the year 102 degrees. Range of barometer one inch and 178 thousandths.

The foregoing table is deduced from observations taken daily at 7 A. M., 2 P. M., and 9 P. M. The height of the mercurial column of the barometer, corrected for temperature and capillarity, is given in inches and thousandths, the barometer having a zero point adjustment. The temperature is given from a standard thermometer, compared with self registering instruments. The rain is given in inches and tenths.

The prevailing winds are from the two points of compass having the greatest number of observations, the first being the highest.

The surface winds, during the year, for eight points of compass, were noted as follows:

	Times		Times.
North.....	64	North-East.....	96
East.....	8	South-East.....	147
South.....	78	South-West.....	404
West....	54	North-West.....	255

The prevailing winds were southerly and westerly in all the months except May and June, and westerly in all but August, which were north-easterly.

There has been no injury to crops this year by frosts. The month of March was more than usually stormy. Wheat on clay soils, where the land was not well drained, was badly injured by freezing at night and thawing during the day. Such lands yielded only about half a crop.

Late sowed oats and early planted potatoes were injured by the dry weather of May and June; the fall rains, however, were favorable to the potato crop, and it more than equalled the expectations of farmers.

We had no peaches nor cherries; the extreme cold weather of February probably killed both. There were less apples than usual. Currants and grapes were abundant, and ripened well.

For purposes of comparison, a few principal items in the meteorology of this section for three years, ending October 31, 1861, are brought together:

Year.	Mean barometer.	Mean temperature.	Am't of rain and snow, inches.	Depth of snow, inches.
1859.....	28.688	49.	25 571	44.
1860.....	28 659	48 8	34.677	56.
1861.....	28 547	49.2	28 174	43.1
Mean	28.625	49.	29.441	47 7

PREVAILING SURFACE WINDS.

Month.	1859.	1860.	1861.
1858—November	S. W. & N. W.	S. E. & S. W.	S. W. & N. W.
December	S. E. & S. W.	S. W. & N. W.	S. W. & N. W.
1859—January	S. & S. W.	S. W. & N. W.	S. E. & S. W.
February	S. E. & S. W.	S. W. & S. E.	S. W. & N. W.
March	S. & S. W.	N. W. & S. E.	S. W. & N. W.
April	S. W. & N. W.	S. W. N. E. & N. W.	S. W. & N. W.
May	S. E. & S. W.	S. W. & N. E.	S. E. & N. W.
June	S. E. & S. W.	N. W. & S. W.	S. W. & N. W.
July	S. E. & S. W.	S. W. & N. W.	S. W. & N. W.
August	S. E. & S. W.	S. W. & N. W.	N. E. & S. W.
September	S. E. & S. W.	S. W. & S. E.	S. W. & N. W.
October	S. W. & N. W.	S. W. & N. E.	S. E. & N. W.

The upper currents are generally westerly.

TABLE III.—METEOROLOGY OF STEUBENVILLE, FOR 1861.

BY ROSWELL MARSH, ESQ.

	THERMOMETER.					BAROMETER.			Rain and melted snow.	N. winds.	S. winds.	Cloudy.	Clear.	Rain days.	Snow days.
				Highest.	Lowest.		Highest.	Lowest.							
1860—October	46 $\frac{1}{2}$	60	55	76	32	46.49	48.70	29.00	8.25	14	17	18	13	6	0
November ...	34 $\frac{2}{3}$	44	36 $\frac{1}{2}$	72	6	38.37	37.65	28.80	5.73	15	15	19	11	10	7
December ...	25 $\frac{2}{3}$	33 $\frac{1}{2}$	28 $\frac{1}{2}$	50	9	45.45	48.90	28.78	2.94	17	14	25	6	8	10
1861—January	24 $\frac{2}{3}$	33 $\frac{1}{2}$	30	48	-1	46.43	44.90	28.80	2.00	20	11	21	10	9	8
February	29 $\frac{1}{2}$	41 $\frac{1}{2}$	37	66	-6	43.40	40.77	28.80	2.13	10	18	21	7	9	8
March	31 $\frac{1}{4}$	45 $\frac{1}{4}$	40 $\frac{1}{2}$	74	10	46.48	44.80	29.01	2.55	16	15	20	11	10	8
April	43 $\frac{1}{4}$	57 $\frac{1}{4}$	53 $\frac{1}{2}$	79	28	38.40	38.70	29.00	4.97	14	16	18	12	15	2
May	47 $\frac{1}{4}$	64 $\frac{1}{2}$	60	84	31	38.43	40.75	28.76	2.50	17	14	16	15	10	0
June	61	81 $\frac{1}{2}$	77	94	48	46.50	48.69	29.30	2.50	16	14	12	18	6	0
July	60 $\frac{2}{3}$	78	73 $\frac{1}{2}$	92	50	47.51	50.70	19.24	3.77	11	20	20	11	10	0
August	63	80	74 $\frac{1}{3}$	94	48	52.54	53.70	29.20	3.21	7	24	20	11	8	0
September ..	57	72	67	84	41	52.54	52.67	28.90	5.40	15	15	16	14	9	0
Year	43 $\frac{3}{4}$	57 $\frac{1}{2}$	53	94	-6	45.46	29.90	28.70	45.95	172	193	226	139	110	42

TABLE IV.—METEOROLOGY OF OHIO—BY S. P. HILDRETH, M.D., OF MARIETTA.

REMARKS ON THE SEASONS OF THE YEAR 1861.

The mean temperature for the year ending November 1, 1861, is 51 deg. 55 min., being near the average of a series of years, varying from fifty-one to fifty-three degrees.

The amount of rain and melted snow is 46 $\frac{2}{10}$ $\frac{6}{10}$ inches, being four inches above the mean annual fall for this locality.

Winter months.—The mean temperature of the winter was 33 deg. 55 min., which is above the average. It was a very mild winter, the mercury being at no time at zero, though very near that point. The Ohio River was not closed so as to prevent the passage of steamboats, but at times showed a good deal of floating ice, lasting only a few days.

Spring months.—The mean temperature of the spring was 50 deg. 69 min., which is below the average nearly two degrees, the spring season varying from fifty degrees to fifty-seven.

Summer months.—The mean for the summer was 69 deg. 80 min., which is rather below the usual temperature for this season of the year—the mercury at no time rising above 92 deg.

Autumn months.—The temperature for the autumn is 50 deg. 16 min., which is two or three degrees below the average. In 1854 the mean of this season was 56 deg. 50 min.—showing great variety.

The year just closed has not been marked by any great extremes of temperature, the coldest day being two degrees above zero, and the hottest ninety-two degrees. There has been no suffering of the crops of grain and grass from drouth, but an abundant supply of rain has fallen, and at times when most needed. In the northern and easterly portions of Ohio, unusual quantities of rain have fallen, causing destructive floods in the streams, at uncommon seasons of the year. In Columbiana county, on the 12th August, there fell in six hours, seven inches of rain. The streams, unable to hold this quantity, overflowed their banks, sweeping the bottom lands of their crops, and the Big Beaver and its branches of many bridges. The latter part of September, excessive rains fell on the head waters and branches of the Allegheny, Monongahela and Kanawha Rivers, causing destructive floods on all these streams, especially that of the Big Kanawha. The rain commenced on the 26th September, in the afternoon, and by Sunday morning at one o'clock, the river at Charleston had risen 58 feet. It began rising on Friday evening, and in twelve hours rose 45 feet, nearly four feet an hour—a proof of the excessive rains fallen on the head branches in the mountains. The ravages on this river were greater than on any other, destroying the salt works and all the crops within its reach; and yet an intelligent Union man, the owner of a large farm, who had suffered great losses, in a letter to me, says: "Yet, I believe I would rather take another flood than a second visit from a secession army."

The borders of the Allegheny River not only suffered in the destruction of crops, but also in the loss of great quantities of pine boards, and lumber of all kinds. The Ohio River at Marietta, on the 29th and 30th of September, was covered with drift, embracing logs, boards, bridges and fences, with the dead bodies of many domestic animals. The banks were nearly full, but did not overflow the town. The crops of corn on the low bottoms of the Ohio and Scioto Rivers were destroyed to the amount of several hundred thousand bushels. The Muskingum River was not unusually high, and the crops suffered less than on many other rivers.

The Little Kanawha was higher than ever known, and the region of "rock oil" suffered the loss of over a thousand barrels in casks, besides the destruction of reservoirs, buildings and engines. The effects of this September flood will long be remembered.

On the morning of the second day of May, a destructive frost visited all the southern and middle portions of Ohio, ruining the apple and peach crop of 1861. The trees were in blossom on the 22d of April, and the fruit of considerable size and well set. A similar calamity visited Washington county on the 3d of May, 1843. The apples then were as large as ounce balls. In Indiana and Illinois, the apple crop was large. The wheat crop was not injured by frost, but in places suffered from the ravages of an insect, eating the grain while in the milk. Indian corn, potatoes, oats and hay produced largely. Grapes and the smaller fruits partly compensated the loss of apples, and were in great abundance.

TABLE V.—METEOROLOGY OF KELLEY'S ISLAND.

BY GEORGE C. HUNTINGTON.

Abstract from Meteorological Journal kept at Kelley's Island, Ohio, by George C. Huntington. Latitude 41 d. g. 35 min. 44 sec. North. Longitude 82 deg. 42 min. 32 sec. West. Height above Tide-water, 587 feet; above Lake Erie, 22 feet.

	THERMOMETER.								BAROMETER.					
	Mean temperature at 7 A.M.	Mean temperature at 2 P.M.	Mean temperature at 9 P.M.	Mean temperature of the month.	Maximum temperature.	Minimum temperature.	Range for the month.	Temperature of Lake last day of each month.	Mean height of the month.	Maximum.	Minimum.	Range for the month.	Snow, in inches.	Rain and melted snow, in inches.
From Oct. 1, 1860, to Oct. 1, 1861.														
October, 1860....	51.06	56.80	52.35	53.40	68	42	26	54	29.344	29.58	28.89	0.69	...	2.93
November, "	38.73	42.46	39.03	40.07	63	10	53	34	29.219	29.51	28.70	0.81	...	1.17
December, "	25.42	28.64	26.80	26.95	0	10	30	32	29.346	29.87	28.74	1.13	6 1/4	1.52
January, 1861....	24.58	30.09	27.00	27.22	41	7	34	32	29.303	29.78	28.74	1.04	3	1.27
February, "	29.25	35.50	32.51	32.42	54	-6	60	33	29.226	29.64	28.77	0.87	1 1/2	1.01
March, "	32.48	38.03	33.70	34.73	60	13	47	36	29.293	29.67	28.82	0.75	5 1/2	3.38
April, "	44.10	50.67	45.70	46.82	70	34	36	51	29.211	29.58	28.83	0.75	...	4.19
May, "	50.48	57.52	51.84	53.28	75	35	40	60	29.253	29.62	28.73	0.89	...	2.13
June, "	66.26	73.22	65.80	68.43	86	51	35	70	29.321	29.49	29.09	0.40	...	1.32
July, "	67.71	75.93	68.45	70.69	87	58	29	75	29.332	29.52	29.07	0.45	...	3.69
August, "	69.68	76.29	69.51	71.82	89	59	30	73	29.369	29.55	29.09	0.45	...	4.34
September, " ...	62.26	69.80	63.80	65.28	81	47	34	65	29.366	29.68	29.03	0.65	...	2.52
													15 1/4	29.47

The barometer used is the ordinary marine barometer, and is not corrected for temperature.

All the observations recorded were made at the usual time, viz: 7 A. M., 2 P. M. and 9 P. M. Whenever the thermometer indicated a higher or lower temperature at any other hour than the regular observations, it was noted, but does not appear in the table.

METEOROLOGICAL SUMMARY.

Whole amount of rain and melted snow for the year ending October 1.....	29.47 inches.
Mean temperature of the year at 7 A. M.....	46.83 degrees.
“ “ “ 2 P. M.....	52.91 “
“ “ “ 9 P. M.....	48.04 “
Mean temperature of the year.....	49.26 “
Highest temperature recorded at regular time, August 2 ...	89 “
Lowest “ “ “ February 7.....	6 “
Range of thermometer for the year.....	95 “
Warmest day, August 2, mean temperature	83 “
Coldest day, February 7, mean temperature.....	1.33 “
Mean height of barometer for the year	29.298 inches.
Maximum height of barometer during the year, December 27, 11 A. M.....	29.87 “
Minimum “ “ “ November 18.....	28.70 “
Range of barometer for the year	1.17 “

Earliest frost in the autumn of 1860—very light hoar frost—on the morning of October 13, 1860; not enough to injure vegetation. First freeze, November 22. Latest frost in the spring of 1861, May 2.

A comparison of the year ending October 1, 1861, with the year ending October 1, 1860, shows that the mean temperature differs but three-tenths of a degree, and the mean height of the barometer differs but fifteen-thousandths of an inch ; while the amount of rain during the year ending October 1, 1861, is 3.46 inches greater than during the year ending October 1, 1860.

Few persons, except those who have paid particular attention to the subject, can be aware of the uniformity of mean temperature in the same localities, taking periods of ten years and upwards. It appears from tables published by the Smithsonian Institution during the last year, that in a period of twenty-eight years and a half, during which time a journal was kept by Professor Caswell, of Brown University, at Providence, R. I., the mean temperature of Providence was found to be 43.19 deg. ; and during the whole of this period the oscillations on either side of this, with the exception of four years, were within one degree. This principle being established, the mean temperature of any place being known, it is quite possible to predict, with a good degree of certainty, one month in advance, what the mean temperature of any given month will be. If, for instance, on the last day of September we wish to know about what the mean temperature of October will be, we deduct the aggregate temperature of the preceding eleven months from the aggregate for the year, and the difference will be very near the temperature of the ensuing month.

In reply to your questions in regard to agricultural products, I would say that the past season has been one with which we ought to be well satisfied. Although apples and peaches have been nearly a failure, the grape crop has been very large in quantity and very fine in quality ; and I believe corn, wheat and hay are as good as an average.

TABLE VI.—WHEAT, RYE AND BARLEY.

COUNTIES.	WHEAT.		RYE.		BARLEY.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Adams	33 496	323,040	95	854	171	2,487
Allen	20,077	260,830	495	5,745	288	3,957
Ashland	24,434	367,839	1,910	24,025	1,519	35,210
Ashtabula	4,579	63,174	698	8,201	339	8,014
Athens	19,601	130,487	111	887	22	419
Auglaize	14,116	231,042	1,056	13,131	1,698	37,972
Belmont	22,635	189,634	1,225	9,640	1,941	39,565
Brown	37,086	333,886	694	5,872	523	8,573
Butler	42,723	639,578	264	2,801	9,174	230,500
Carroll	16,073	271,782	4,394	42,706	523	9,596
Champaign	35,499	573,550	903	12,734	463	11,869
Clarke	31,387	552,193	1,730	31,540	496	12,490
Clermont	32,576	314,511	1,035	9,536	729	12,078
Clinton	29,653	386,289	377	4,115	496	11,066
Columbiana	19,318	220,697	4,193	36,042	565	10,595
Coshocton	27,477	371,833	4,703	39,995	353	5,572
Crawford	18,263	239,923	906	10,970	704	14,180
Cuyahoga	4,375	65,585	1,793	18,669	215	4,681
Darke	39,032	564,140	3,231	48,026	2,091	48,294
Defiance	12,260	194,313	193	2,685	80	1,661
Delaware	11,586	175,449	946	11,057	172	3,602
Erie	13,105	250,711	202	3,079	624	16,103
Fairfield	37,865	432,844	1,800	21,323	1,093	20,096
Fayette	16,687	202,087	970	19,748	15	403
Franklin	25,360	349,741	873	10,612	359	6,555
Fulton	12,546	226,214	345	5,232	287	7,132
Gallia	29,350	220,435	107	1,019	24	254
Geauga	3,346	39,916	377	3,897	133	2,813
Greene	34,051	537,440	723	10,723	963	24,520
Guernsey	17,118	121,306	1,838	14,003	457	7,963
Hamilton	16,947	212,991	774	9,023	5,610	120,183
Hancock	29,274	460,385	515	6,803	303	6,590
Hardin	12,047	194,100	738	11,699	106	1,699
Harrison	11,780	129,671	1,522	14,167	435	8,566
Henry	6,279	121,863	87	1,289	24	466
Highland	47,931	501,411	242	2,468	89	2,511
Hocking	18,960	148,255	635	5,520	125	1,902
Holmes	25,154	336,555	3,197	36,427	1,205	25,521
Huron	19,680	265,865	246	3,474	588	12,468
Jackson	20,734	153,547	71	569	2	18
Jefferson	15,491	183,289	1,906	19,477	2,480	57,965
Knox	19,685	258,461	3,792	41,087	429	9,525
Lake	4,631	69,795	445	5,210	889	20,453
Lawrence	12,939	112,723	44	305	28	830
Licking	23,539	284,601	4,019	47,591	478	9,833
Logan	25,155	437,766	796	11,164	385	9,362
Lorain	9,182	144,853	266	3,529	434	9,747
Lucas	6,677	137,148	230	3,087	379	8,071
Madison	9,104	133,134	1,577	21,977	20	342
Mahoning	10,739	143,245	1,187	13,466	452	9,439
Marion	11,763	163,283	483	6,197	86	1,439
Medina	12,291	171,016	908	11,663	415	8,008
Meigs	21,199	169,517	216	1,780	11	252
Mercer	19,191	285,812	1,471	17,107	1,353	24,838
Miami	34,319	588,782	1,543	22,705	2,130	57,788
Monroe	20,364	94,999	667	4,456	310	4,558
Montgomery	35,299	507,768	2,199	21,524	3,059	73,224
Morgan	17,875	123,986	326	2,743	360	6,042

WHEAT, RYE AND BARLEY—Continued.

COUNTIES.	WHEAT.		RYE.		BARLEY.	
	Acres.	Bushels	Acres.	Bushels.	Acres.	Bushels.
Morrow	11,212	129,389	628	7,524	258	5,183
Muskingum	33,614	323,414	2,054	21,635	374	6,600
Noble	15,809	91,460	390	2,953	129	1,896
Ottawa	8,254	87,632	9	157	10	240
Paulding	3,256	41,824	57	625	17	324
Perry	21,930	203,860	943	8,787	328	5,375
Pickaway	27,536	295,675	634	7,650	14	360
Pike	13,759	126,085	164	1,356	7	80
Portage	10,423	130,053	1,500	20,384	897	17,636
Preble	38,589	482,120	818	9,791	1,424	33,986
Putnam	12,103	162,424	386	3,412	72	1,027
Richland	29,499	429,113	2,988	38,373	2,225	51,967
Ross	35,701	362,560	649	6,554	68	839
Sandusky	22,022	359,442	367	4,753	128	2,126
Scioto	16,291	127,469	22	155	19	274
Seneca	39,992	677,789	514	7,481	642	12,247
Shelby	19,151	424,542	1,811	21,142	1,131	26,131
Stark	46,892	690,769	1,468	17,906	5,083	89,451
Summit	20,100	265,107	1,005	12,788	1,403	29,969
Trumbull	6,302	74,279	969	9,500	41	723
Tuscarawas	31,674	472,838	3,563	36,942	643	11,541
Union	10,763	142,336	503	5,724	71	1,281
Van Wert	10,881	155,921	363	4,150	282	5,164
Vinton	10,212	73,712	94	716	15	155
Warren	34,075	466,881	369	3,902	5,365	112,429
Washington	25,821	138,942	815	5,533	81	992
Wayne	36,288	573,946	1,524	18,100	1,335	26,193
Williams	15,967	271,884	931	11,437	179	3,847
Wood	13,601	208,975	344	3,804	198	5,252
Wyandot	16,069	260,030	663	10,156	223	5,609
Totals	1,844,677	23,640,356	94,394	1,078,764	71,564	1,548,477

TABLE VII.—CORN, BUCKWHEAT AND OATS.

COUNTIES.	CORN.		BUCKWHEAT.		OATS.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Adams.....	35,598	1,125,394	50	381	7,630	157,592
Allen.....	23,196	766,614	557	5,686	6,705	164,151
Ashland ..	21,605	691,512	580	7,291	15,655	520,935
Ashtabula ..	12,601	473,102	1,276	16,000	11,211	369,083
Athens.....	24,083	931,888	1,454	14,529	5,920	141,267
Auglaize.....	18,244	564,594	615	6,215	6,572	182,129
Belmont.....	30,443	1,220,747	2,603	29,583	21,506	680,375
Brown.....	42,181	1,472,960	139	1,155	11,429	251,055
Butler.....	55,566	2,581,596	290	3,752	10,012	265,338
Carroll.....	13,099	358,442	1,672	19,396	15,303	418,515
Champaign ..	40,358	1,798,412	236	3,364	8,519	312,963
Clarke.....	35,416	1,515,896	156	1,845	7,437	274,252
Clermont.....	42,470	1,491,087	316	3,297	14,947	370,411
Cliston.....	47,466	2,192,521	431	3,985	6,757	186,620
Columbiana ..	17,317	463,263	2,089	25,638	17,599	530,150
Coshocton.....	36,119	1,247,265	1,347	15,549	12,427	369,598
Crawford.....	28,012	1,019,925	787	10,494	14,232	526,111
Cuyahoga.....	14,754	631,930	548	7,677	9,622	334,789
Darke.....	36,427	1,220,054	632	6,636	10,029	314,519
Defiance.....	11,671	419,193	472	5,339	5,162	135,656
Delaware.....	31,503	1,205,535	868	8,221	9,180	284,973
Erie.....	23,236	919,983	497	8,056	6,635	253,430
Fairfield.....	48,211	2,052,297	504	6,595	15,342	385,668
Fayette.....	56,760	2,597,478	162	1,820	2,321	72,436
Franklin.....	63,743	2,614,769	877	8,528	9,931	276,924
Fulton.....	12,356	463,312	751	11,239	3,407	103,902
Gallia.....	23,051	694,888	422	3,410	5,645	110,752
Geauga.....	7,090	219,156	582	8,673	6,941	243,597
Greene.....	43,663	2,233,391	106	1,263	8,211	231,587
Guernsey.....	23,410	854,518	2,339	23,657	14,760	395,234
Hamilton.....	32,194	1,476,351	507	4,724	9,214	232,543
Hancock.....	29,605	1,007,756	454	5,641	9,270	260,543
Hardin.....	19,608	636,661	402	4,505	5,820	151,928
Harison.....	16,681	611,620	893	8,668	11,271	374,549
Henry.....	7,360	288,913	202	2,144	1,813	46,839
Highland.....	55,218	2,153,194	106	1,053	6,154	147,001
Hocking.....	18,065	626,705	1,045	10,065	6,853	143,312
Holmes.....	20,592	663,187	1,464	17,187	14,887	443,435
Huron.....	28,078	963,576	607	9,013	15,186	479,413
Jackson.....	20,542	584,091	356	2,760	5,693	103,493
Jefferson.....	15,307	511,216	649	6,144	13,149	418,485
Knox.....	34,412	1,237,729	1,214	11,310	14,847	490,767
Lake.....	8,467	306,443	492	6,102	4,357	160,173
Lawrence.....	18,312	526,736	143	1,502	3,819	65,632
Licking.....	52,202	2,007,760	1,490	16,926	18,205	513,561
Logan.....	33,514	1,118,553	595	6,220	8,164	247,210
Lorain.....	17,239	646,428	415	7,513	9,080	313,555
Lucas.....	7,969	339,360	440	5,998	2,623	82,466
Madison.....	44,632	1,695,918	272	3,526	3,480	99,442
Mahoning.....	11,742	344,250	991	13,177	12,324	406,705
Marion.....	36,840	1,421,025	568	7,362	8,892	294,993
Medina.....	16,250	621,760	429	5,622	12,831	475,091
Meigs.....	16,900	591,538	592	6,038	4,322	101,724
Mercer.....	18,112	526,452	323	3,136	5,567	123,196
Miami.....	44,774	1,906,546	261	2,738	10,611	385,885
Monroe.....	22,170	693,664	2,409	22,489	14,178	332,331
Montgomery.....	39,073	1,733,593	200	2,287	12,949	462,937
Morgan.....	23,335	878,692	1,696	18,338	9,176	244,640

TABLE VII.—CORN, BUCKWHEAT AND OATS—Continued.

COUNTIES	CORN.		BUCKWHEAT.		OATS.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Morrow	23,714	804,810	1,048	12,003	12,705	425,115
Muskingum	37,786	1,589,017	1,401	15,062	15,400	408,700
Noble	25,510	966,448	1,701	18,218	11,171	306,821
Ottawa	5,117	195,827	258	5,357	1,407	46,839
Paulding	4,717	173,602	228	2,096	787	17,405
Perry	21,725	800,834	1,322	12,451	8,994	229,699
Pickaway	71,350	3,005,856	299	4,009	4,613	94,595
Pike	25,650	1,043,514	154	1,216	4,733	75,752
Portage	12,105	547,039	874	12,082	10,914	364,622
Preble	39,541	1,721,604	192	2,569	10,842	327,783
Putnam	16,538	534,014	496	4,218	3,041	67,480
Richland	25,685	843,619	895	10,696	21,331	711,702
Ross	77,961	3,210,717	230	2,320	5,106	102,017
Sandusky	18,167	629,031	805	8,662	6,777	241,362
Scioto	25,547	1,091,521	206	1,738	4,019	73,859
Seneca	27,819	1,007,461	458	6,727	15,323	536,679
Shelby	23,577	703,101	668	6,288	11,270	285,512
Stark	22,195	793,345	1,279	19,789	20,322	691,273
Summit	12,339	500,479	727	9,608	10,329	364,036
Trumbull	12,288	486,262	1,609	21,731	11,824	382,362
Tuscarawas	24,914	871,928	1,837	22,783	20,681	672,678
Union	31,255	1,090,468	568	5,948	5,424	136,897
Van Wert	11,495	315,468	426	4,358	2,306	55,775
Vinton	15,071	477,141	651	6,453	4,832	93,757
Warren	44,609	2,092,560	321	3,531	10,645	319,309
Washington	28,932	923,216	2,756	27,204	11,426	274,539
Wayne	25,742	973,892	909	11,166	21,625	782,394
Williams	14,428	474,455	455	5,472	5,262	180,680
Wood	18,812	630,590	889	12,503	5,040	168,059
Wyandot	24,161	897,477	532	5,889	6,161	172,162
Totals	2,397,639	91,588,704	66,827	763,930	830,104	25,127,724

TABLE VIII.—POTATOES, MEADOW, BUTTER AND CHEESE.

COUNTIES.	POTATOES.		MEADOW.		BUTTER.	CHEESE.
	Acres.	Bushels.	Acres	Tons of Hay	Pounds.	Pounds.
Adams.....	319	23,231	7,679	7,867	273,263	4,525
Allen.....	713	78,173	10,899	11,212	316,580	21,611
Ashland.....	1,009	105,561	25,873	36,572	545,421	90,784
Ashtabula.....	1,856	232,610	53,566	72,431	751,881	3,308,666
Athens.....	854	76,672	15,069	19,028	420,673	123,162
Auglaize.....	936	118,842	7,580	8,394	290,346	2,620
Belmont.....	1,159	118,798	22,137	28,257	604,264	16,140
Brown.....	750	55,163	9,742	9,614	370,922	6,048
Butler.....	1,187	114,214	7,223	8,651	434,974	1,906
Carroll.....	679	77,723	20,052	29,021	572,097	21,906
Champaign.....	675	93,612	14,565	19,555	385,982	80,077
Clarke.....	854	99,392	13,244	17,202	373,241	19,481
Clermont.....	4,949	284,457	15,760	16,444	446,639	1,575
Clinton.....	745	69,719	12,378	13,412	376,454	38,317
Columbiana.....	1,173	125,266	36,291	51,002	708,921	26,852
Co-hecton.....	1,158	83,358	17,020	23,664	454,716	13,458
Crawford.....	1,115	121,920	22,955	33,456	445,783	5,555
Cuyahoga.....	3,860	320,346	35,238	45,202	779,756	1,806,951
Darke.....	1,016	106,303	10,308	11,131	391,165	4,011
Defiance.....	855	90,919	9,020	9,155	238,762	12,563
Delaware.....	888	86,939	21,436	32,060	386,997	22,210
Erie.....	1,803	208,755	12,503	18,077	358,547	57,354
Fairfield.....	1,136	96,645	16,615	23,479	574,542	11,426
Fayette.....	255	43,000	8,023	8,914	257,296	4,954
Franklin.....	1,950	189,810	18,204	22,386	469,766	12,085
Fulton.....	894	112,570	14,331	18,690	342,817	47,924
Gallia.....	638	69,440	8,942	9,918	215,017	23,433
Genaga.....	1,222	128,902	39,847	54,325	723,681	5,299,144
Greene.....	1,056	116,794	10,363	13,053	348,679	4,456
Guernsey.....	636	51,611	21,228	24,839	488,246	18,041
Hamilton.....	4,766	316,471	13,381	14,883	315,948	2,226
Hancock.....	808	83,271	14,622	17,844	451,686	10,511
Hardin.....	681	73,361	8,714	10,946	242,223	13,571
Harrison.....	469	49,573	20,164	28,228	433,368	10,832
Henry.....	485	54,412	3,453	4,497	196,291	4,182
Highland.....	631	60,995	13,476	13,309	325,444	11,795
Hocking.....	624	48,469	8,846	9,970	237,708	11,856
Holmes.....	892	96,655	22,183	29,551	525,614	17,471
Huron.....	1,515	158,073	31,198	44,174	711,448	68,387
Jackson.....	435	36,914	10,316	11,449	192,624	10,361
Jefferson.....	1,531	76,021	18,954	26,979	387,797	24,440
Knox.....	997	103,961	22,265	32,433	573,713	26,584
Lake.....	2,352	251,265	17,010	23,104	330,410	286,274
Lawrence.....	502	36,732	2,737	3,628	107,259	1,671
Licking.....	1,226	132,737	30,937	45,449	742,908	182,433
Logan.....	687	77,277	13,283	17,498	382,774	4,976
Lorain.....	1,828	201,218	35,775	49,071	1,216,200	1,325,781
Lucas.....	1,142	110,099	9,879	13,314	136,388	24,280
Madison.....	473	55,986	13,737	16,279	175,361	153,769
Mahoning.....	961	114,067	32,853	51,771	568,193	168,377
Marion.....	823	85,208	17,793	21,824	296,495	5,543
Medina.....	1,327	145,541	37,449	47,042	936,907	771,222
Meigs.....	1,363	101,448	12,364	16,208	274,109	48,067
Mercer.....	622	43,756	7,913	8,132	248,693	5,805
Miami.....	941	100,979	9,390	10,202	355,364	13,621
Monroe.....	952	69,997	12,156	13,380	295,017	52,339
Montgomery.....	561	62,401	10,692	11,797	272,651	380
Morgan.....	670	63,264	15,911	20,451	478,682	49,963

TABLE VIII.—POTATOES, MEADOW, BUTTER AND CHEESE—Continued.

COUNTIES.	POTATOES.		MEADOW.		BUTTER.	CHEESE.
	Acres.	Bushels.	Acres.	Tons of Hay	Pounds.	Pounds.
Morrow.....	944	184,107	24,754	36,990	634,260	44,107
Muskingum.....	1,790	135,052	24,982	31,541	748,959	16,993
Noble.....	604	49,066	14,185	16,976	415,336	50,321
Ottawa.....	473	45,921	4,266	7,374	90,496	3,805
Paulding.....	308	28,785	2,191	2,286	67,594	1,320
Perry.....	805	69,001	16,033	19,174	436,897	14,220
Pickaway.....	554	59,550	8,760	10,132	273,356	3,745
Pike.....	342	27,435	4,273	4,229	109,286	1,032
Portage.....	1,603	207,747	45,627	62,778	1,036,928	3,784,289
Preble.....	805	80,301	7,496	6,926	430,500	1,633
Putnam.....	706	47,571	6,938	7,200	251,548	4,949
Richland.....	1,293	132,723	29,580	41,118	742,348	13,293
Ross.....	734	71,396	8,492	9,630	265,456	11,221
Sandusky.....	1,230	130,091	14,461	20,718	313,209	2,393
Scioto.....	717	58,211	5,636	6,706	100,193	1,162
Seneca.....	1,391	150,633	26,566	42,069	667,326	32,735
Shelby.....	804	65,203	7,498	8,921	287,307	4,126
Stark.....	1,490	176,270	38,033	52,377	933,831	38,287
Summit.....	1,328	170,607	29,170	40,393	729,942	1,601,838
Trumbull.....	2,120	216,609	53,792	80,765	1,081,178	4,450,412
Tuscarawas.....	990	113,958	25,620	34,716	625,346	21,347
Union.....	659	71,143	14,603	19,213	308,457	126,537
Van Wert.....	500	39,649	5,870	6,347	191,031	11,426
Vinton.....	433	35,009	8,962	10,520	178,403	12,414
Warren.....	1,027	103,388	9,982	11,349	414,286	6,114
Washington.....	2,090	159,996	17,850	20,686	521,119	61,894
Wayne.....	1,294	134,991	36,022	51,065	862,095	45,702
Williams.....	824	86,817	13,971	14,441	331,528	15,503
Wood.....	924	107,300	10,708	15,366	312,243	12,335
Wyandot.....	868	90,960	16,038	21,584	319,373	8,095
Totals.....	96,254	9,365,386	1,538,562	2,027,160	38,440,498	24,816,220

TABLE IX.—OF THE NUMBER AND VALUE OF HORSES, MULES AND CATTLE
IN OHIO, FOR THE YEAR ENDING JULY 1, 1861.

COUNTIES.	Number of Horses.	Value.	No. of Mules.	Value.	Number of Cattle.	Value.
Adams	7,877	\$412,089	239	\$11,278	17,793	\$164,814
Allen	7,255	296,272	122	4,354	18,544	126,880
Ashland	9,080	421,339	50	2,076	21,330	193,492
Ashtabula	9,621	396,462	77	4,570	42,070	521,696
Athens	6,492	290,657	53	2,840	17,516	186,667
Auglaize	6,382	282,523	219	12,105	16,474	130,115
Belmont	11,670	639,514	90	5,511	23,856	268,417
Brown	10,106	562,047	231	12,742	17,595	194,098
Butler	12,023	728,550	226	14,461	16,431	211,774
Carroll	6,316	293,837	10	720	16,443	129,173
Champaign	9,720	492,548	221	11,565	19,743	250,748
Clark	9,334	514,063	334	16,767	18,467	248,533
Clermont	10,457	599,598	458	36,282	15,892	201,338
Clinton	10,171	507,805	319	14,868	18,582	241,445
Columbiana	10,222	449,087	94	5,129	22,915	210,445
Coshocton	9,953	453,280	21	1,935	25,419	228,450
Crawford	8,924	461,044	71	3,450	21,292	203,539
Cuyahoga	11,529	535,363	60	2,910	29,871	419,873
Darke	10,280	501,728	73	4,425	24,918	175,557
Defiance	4,130	181,960	29	1,515	12,721	108,593
Delaware	9,360	457,729	125	6,677	20,981	243,492
Erie	6,111	325,158	18	795	12,600	164,529
Fairfield	12,249	571,945	100	3,975	34,086	253,211
Fayette	9,345	492,979	362	19,344	21,492	378,146
Franklin	14,076	780,110	204	12,163	24,752	335,674
Fulton	4,289	146,367	23	523	15,419	123,422
Gallia	5,727	255,844	139	7,451	14,908	136,424
Geauga	1,604	287,926	43	2,123	36,965	523,147
Greene	10,636	627,537	301	13,979	19,951	266,732
Guernsey	9,044	412,060	29	2,395	20,528	186,736
Hamilton	16,759	929,265	534	39,170	18,550	297,796
Hancock	10,283	422,779	60	2,747	24,403	191,997
Hardin	5,272	210,736	152	6,234	15,328	140,534
Harrison	6,570	361,856	31	1,840	14,251	149,053
Henry	2,498	92,451	23	1,021	7,613	70,930
Highland	12,729	604,316	315	14,320	12,756	241,518
Hocking	5,578	226,107	40	1,353	13,497	99,548
Holmes	7,989	353,344	83	4,370	20,187	145,369
Huron	10,467	448,119	69	2,715	26,499	276,640
Jackson	4,682	194,271	114	5,709	16,837	144,802
Jefferson	7,129	332,879	27	1,800	16,679	142,296
Knox	11,120	557,135	45	2,390	23,482	227,534
Lake	4,627	210,598	28	855	13,742	179,810
Lawrence	3,258	183,792	277	20,637	12,082	153,298
Licking	14,655	751,749	62	4,254	33,107	386,234
Logan	9,238	419,986	303	13,706	21,120	198,222
Lorain	10,172	430,898	60	3,259	36,996	438,422
Lucas	3,899	153,446	19	985	9,747	96,047
Madison	7,821	409,908	287	13,645	22,686	492,356
Mahoning	8,938	419,935	206	9,273	25,185	307,909
Marion	7,689	390,066	81	5,489	19,537	232,077
Medina	9,010	432,944	51	2,582	29,145	325,605
Meigs	5,035	260,048	136	6,355	13,012	159,683
Mercer	5,705	253,144	61	2,368	14,837	108,497
Miami	9,587	566,370	249	13,920	16,738	166,253
Monroe	6,566	286,020	49	2,185	16,764	162,798
Montgomery	12,064	691,108	155	9,059	19,198	188,991
Morgan	7,769	362,429	129	6,660	20,929	188,754
Morrow	9,242	430,657	56	3,125	23,257	212,794
Muskingum	13,731	616,016	69	3,995	35,073	330,423

TABLE IX.—OF THE NUMBER AND VALUE OF HORSES, ETC.—Continued.

COUNTIES.	Number of Horses.	Value.	No. of Mules.	Value.	Number of Cattle.	Value.
Noble	8,137	\$335,816	25	\$1,063	20,714	\$154,063
Ottawa	2,371	111,491	3	225	5,807	67,478
Paulding	1,336	54,040	3	115	5,793	53,121
Perry	7,475	306,711	25	1,302	21,484	161,862
Pickaway	11,419	603,218	109	6,055	25,445	430,770
Pike	5,095	286,854	196	12,856	10,439	132,771
Portage	8,744	420,711	62	2,555	38,397	516,509
Preble	9,547	578,459	66	5,310	17,083	179,374
Putnam	4,873	192,386	29	1,232	14,020	86,335
Richland	11,066	551,801	101	5,730	25,171	223,210
Ross	12,321	652,214	346	15,020	25,307	364,357
Sandusky	7,381	366,756	19	1,260	18,783	175,827
Scioto	4,646	273,613	362	29,732	14,348	174,964
Seneca	11,908	608,478	41	2,850	24,934	220,001
Shelby	6,876	328,494	63	2,770	15,171	121,431
Stark	13,062	622,246	87	4,755	33,751	280,563
Summit	7,736	419,917	151	4,992	28,132	339,576
Trumbull	10,402	483,394	132	7,993	49,539	640,080
Tuscarawas	11,062	503,532	45	1,913	31,912	223,101
Union	7,942	374,230	197	7,839	16,311	209,359
Van Wert	3,474	134,294	34	1,540	10,021	79,177
Vinton	3,523	165,288	110	6,005	11,973	131,016
Warren	10,855	627,793	109	8,455	16,213	217,320
Washington	8,059	358,945	86	4,509	22,500	245,221
Wayne	13,137	628,107	161	8,961	35,173	255,198
Williams	4,961	215,879	15	677	16,159	149,732
Wood	5,786	209,448	61	1,918	18,204	144,024
Wyandot	6,598	319,413	162	7,426	17,777	192,045
	726,648	....	11,018	....	1,840,155	....

TABLE X.—OF THE NUMBER AND VALUE OF HOGS AND SHEEP IN OHIO FOR THE YEAR ENDING JULY 1, 1861.

COUNTIES.	No. of Hogs.	Value.	No. of Sheep.	Value.
Adams.....	40,028	\$100,345	17,994	\$19,201
Allen.....	23,502	49,809	24,297	23,429
Ashland.....	25,412	69,598	67,942	110,495
Ashtabula.....	6,666	20,379	61,799	92,215
Athens.....	22,172	66,700	28,883	50,796
Auglaize.....	28,128	49,267	17,524	18,801
Belmont.....	30,583	90,266	87,483	209,792
Brown.....	54,344	172,198	18,010	23,018
Butler.....	49,992	208,367	5,135	8,474
Carroll.....	12,965	28,448	109,521	196,118
Champaign.....	33,547	107,770	35,382	70,086
Clark.....	34,599	123,775	42,141	89,435
Clermont.....	47,847	145,602	11,647	18,786
Clinton.....	56,282	175,615	33,228	56,856
Columbiana.....	18,041	42,215	141,357	242,761
Coshocton.....	33,002	92,560	77,073	142,035
Crawford.....	37,222	95,643	52,596	98,714
Cuyahoga.....	10,367	35,729	49,793	75,824
Darke.....	49,507	107,107	17,177	18,822
Defiance.....	18,795	30,510	10,954	14,190
Delaware.....	30,564	102,119	58,781	111,440
Erie.....	10,848	36,184	39,589	68,828
Fairfield.....	51,201	149,067	29,216	40,290
Fayette.....	64,484	196,144	34,567	57,718
Franklin.....	67,029	223,048	19,466	36,451
Fulton.....	12,164	18,739	21,013	22,124
Gallia.....	21,675	42,647	18,388	19,022
Geauga.....	4,157	15,211	41,239	61,613
Greene.....	56,963	218,279	21,054	49,932
Guernsey.....	22,445	65,940	97,309	179,742
Hamilton.....	45,188	143,377	3,901	7,917
Hancock.....	45,569	75,989	36,792	39,469
Hardin.....	29,121	47,796	17,792	22,327
Harrison.....	12,106	38,735	163,548	342,121
Henry.....	9,510	14,932	4,393	5,621
Highland.....	60,245	195,052	21,550	28,124
Hocking.....	23,078	46,405	19,011	19,625
Holmes.....	22,557	55,562	49,938	78,734
Huron.....	21,425	56,159	88,196	115,253
Jackson.....	18,655	33,795	14,362	13,530
Jefferson.....	14,094	35,169	131,381	225,639
Knox.....	32,023	103,612	93,437	189,404
Lake.....	3,739	13,706	35,328	52,548
Lawrence.....	18,065	32,753	9,053	10,002
Licking.....	48,219	149,622	169,697	354,209
Logan.....	33,281	71,181	34,860	48,430
Lorain.....	13,314	40,638	85,500	133,932
Lucas.....	7,813	12,744	8,957	10,465
Madison.....	35,439	143,684	74,873	172,311
Mahoning.....	12,166	34,782	90,069	175,838
Marion.....	37,750	102,867	60,463	108,536
Medina.....	13,152	40,221	98,467	161,073
Melgs.....	14,789	43,394	14,042	24,297
Mercer.....	38,465	54,600	14,100	15,143
Miami.....	36,695	119,453	13,105	18,725
Monroe.....	16,684	43,125	19,648	33,177
Montgomery.....	44,444	156,232	7,810	9,961
Morgan.....	25,836	72,838	36,091	60,949
Morrow.....	29,919	75,923	69,368	124,102
Muskingum.....	45,394	127,058	112,421	184,755
Noble.....	25,895	66,423	33,567	43,412

TABLE X.—Continued.

COUNTIES.	No. of Hogs.	Value.	No. of Sheep.	Value.
Ottawa.....	8,981	\$16,774	11,155	\$15,958
Paulding.....	8,111	11,385	1,863	2,273
Perry.....	26,173	60,259	54,387	81,843
Pickaway.....	63,508	218,234	15,997	24,403
Pike.....	32,351	99,352	12,752	15,274
Portage.....	8,119	31,690	81,465	166,825
Preble.....	51,970	193,171	10,468	17,361
Putnam.....	26,712	36,654	13,786	13,545
Richland.....	34,834	84,227	62,626	102,506
Ross.....	76,222	251,790	19,193	21,246
Sandusky.....	26,953	48,999	28,604	36,662
Scioto.....	20,643	61,384	10,098	11,946
Seneca.....	33,604	78,219	73,081	111,503
Shelby.....	30,841	60,940	18,380	23,302
Stark.....	32,967	80,580	80,040	135,055
Summit.....	12,955	40,820	65,289	121,892
Trumbull.....	7,998	29,340	78,535	120,834
Tuscarawas.....	36,196	70,872	106,679	162,547
Union.....	27,252	87,698	31,619	59,825
Van Wert.....	23,018	26,876	8,466	9,370
Vinton.....	14,696	34,342	17,200	21,720
Warren.....	42,640	186,275	13,644	25,105
Washington.....	21,249	59,090	32,594	49,468
Wayne.....	35,706	89,955	71,848	108,178
Williams.....	21,018	44,340	22,102	30,197
Wood.....	17,833	27,294	14,268	14,182
Wyandot.....	28,417	65,342	54,007	97,269
	2,571,404		3,934,763	

TABLE XI.—GENERAL CONDITION OF AGRICULTURE IN 1861.

COUNTY.	GRAIN CROPS, ETC.	REMARKS.
Adams John Loughry.	Wheat very good, both in quantity and quality. Corn, fine crop. Oats good. Fruit very imperfect. Grass and hay good.	We had an earthquake that shook our houses.
Allen..... David Crall.	Wheat not so generally good as last year. Corn good; the yield not so great as last year. Oats, barley and buckwheat as good as last year. Smaller fruits good and plenty; but apples, pears, peaches, plums, cherries, &c., scarcely any worth naming. Grass short. Hay fully up to last year.	As much wheat in quantity, there having been more sown. A greater quantity of corn raised, there having been more planted. Grass short the latter part of the season, on account of drought. Hay better in quality. More oats, less barley and buckwheat, raised. Aurora borealis very frequent and unusually brilliant and extensive.
Athens A. B. Walker.	Wheat is 20 per cent. better. Corn deficient one-third. Oats 20 per cent. better. Potatoes, inferior crop. Apples and peaches almost entirely failed; small fruits abundant. Grass and hay some better than last year. Farmers have sown anti weevil wheat.	Wheat is now worth 75 cents; corn 25 to 30 cents; oats 20 cents; potatoes 40 cents, decaying badly. The past season has been one of marked character. Spring backward, with heavy rains to the 3d of June, followed by drought till 3d, or indeed 10th September. South, and but six miles distant, they had seasonable weather, but the central and northern parts of our county suffered severely. Crops and garden vegetables suffered severely.
Carroll W. Butler.	Wheat, medium crop. Corn, pretty good crop. Other grains, moderate crops. Buckwheat tolerable. Fruit almost an entire failure. Grass and hay two-thirds of a crop.	Wheat better than it has been for the last two years. Corn about the same as last year; worth 40 cents per bushel. Grass and hay not very good, owing to drought in the early part of summer.
Columbiana O. L. Lodge.	Wheat, average per acre in 1860, 15 bushels; in 1861, 10 bushels. Corn a fair crop. Other grains good. Fruit not half a crop. Grass and hay not half as good as last year.	
Clark..... J. T. & W. Warder.	Wheat, from 8 to 10 bushels per acre. Corn, on clay lands, very poor; on bottom land, very good. Barley very light. Rye medium. Oats very good. No fruit. Timothy very good; clover medium; wild herd and blue grass very short.	Wheat, probably 8 bushels per acre will be nearest the truth. Corn, on clay lands from 15 to 25, on bottom land from 60 to 120 bushels per acre.
Darke Noah Arnold.	Wheat one-fourth less, but, on the whole, a fair crop. Corn crop about as large as last year. Oats about equal to last year. Barley good. Rye, an ordinary crop. Fruit, very few apples or peaches, good crop of plums. Grass about equal to last year.	Wheat generally well secured, but grain not so good as last year. Corn better in quality, having entirely matured before frost. Barley somewhat injured by the army worm. There is not so much meadow land, in proportion to the tillable land, as in former years.

TABLE XL.—GENERAL CONDITION OF AGRICULTURE IN 1861—Continued.

COUNTY.	GRAIN CROPS, ETC.	REMARKS.
Erie..... F. D. Parish.	Wheat crop abundant, and of superior quality. Corn crop very good. Oat crop is good. Little rye and barley. Buckwheat, an ample supply. Fruit nearly a failure, except grapes, the yield of which has been very abundant and of superior quality; a moderate yield of peaches and apples on the shore of the bay and lake, not a quarter of a crop. Grass good, but hay crop lighter than common.	Wheat more in quantity and better in quality than last year. Corn crop something less in quantity than last year, but very good in quality. The quantity of grapes on Kelley's Island and on the mainland in its vicinity has been very large; the <i>nation</i> has been partially served with them from this region—the national capital and large Atlantic cities, and the cities west and south of us. Vineyards are increasing in number and size. The hay crop less than common, for want of seasonable rain.
Fairfield..... J. C. Weaver.	Wheat is 20 per cent. better than last year. Corn one-third short of last year's crop. Other grains generally better. A few apples. Grass or hay will compare with last year.	We have no fruit in the county, except a very few inferior apples.
Hancock..... Aaron Hall.	Wheat for the year 1861 is not an average crop. Corn is a good average crop. Other grains, average. Little fruit. Grass or hay good.	Fruit very light, and poor in quality.
Hardin..... Thomas Rough.	Wheat one fourth less than 1860. Corn one-fourth less. Oats nearly equal. Apples three fourths less. Hay or grass one-fourth less.	Wheat was winter killed. Corn suffered from drought. Peaches more than last year, yet very scarce.
Huron..... W. Case.	Wheat, in quantity and quality, about like last year. Corn on the prairies much better, otherwise about the same. Oats a good crop. Buckwheat and rye a good crop. Grapes better than usual. Hay equal to last year. Pasturage better.	All kinds of fruit nearly a failure, except grapes.
Lake..... J. Coolidge.	Wheat fully 20 per cent. better than last year. Corn 20 per cent. less in quantity, but better in quality. Barley a light crop. Oats 50 per cent. less than last year. Potatoes, tolerable crop. Sorghum, a good crop. Grapes almost a failure. Strawberries 50 per cent. less; other small fruits good. Apples not over half a crop. Grass or hay 33 per cent. less.	For the first time in thirty years our best corn was grown upon our dry, porous, drift deposit land; the season was unfavorable for corn on our strong, moist land. The early varieties of potatoes got a fine start, set well, and potatoes large, but a change in the season from dry to wet produced disease, and they were a total failure; late varieties a fair crop, and good. Over ten thousand gallons of sorghum molasses made, of superior quality; the average yield is about 240 gallons per acre; culture increasing. Old orchards have exhibited an unusual fresh growth this season. New orchards are fast multiplying, and of increased size.

TABLE XI.—GENERAL CONDITION OF AGRICULTURE IN 1861—Continued.

COUNTY.	GRAIN CROPS, ETC.	REMARKS.
Logan W. Lawrence.	Wheat, more acres harvested altogether; crop about equal to last year. Corn on bottom lands better than last year; upland crops not one-half. Oats an average crop. Potatoes one-fourth. No peaches, few cherries, and few apples. Grass and hay a good average crop.	Wheat, the grain is better, and on high or rolling land crop more abundant; on low or flat land not so good as on same kind of land last year, more chess this year in such land. Drought from June to September injured crops. Fruits killed by Spring frosts. Drought began—say June 1, and ended September 15.
Lorain N. B. Gates.	Wheat, the crop of 1861 was a very good one, not quite equal to 1860. Corn, in the north part of the county, a good crop; in the south owing to drought in mid-summer and the grasshoppers, not half a crop. Oats about the same as 1860. Barley not so good. Potatoes not very good. Little fruit, except grapes. Grass and hay an average crop, two-thirds of the crop of 1860.	Corn crop not more than two-thirds as much as 1860. A good deal of complaint of the rot in potatoes; not more than half the crop of 1860. Apples and pears mostly killed by the great freeze of May 2, 1861.
Mahoning..... David Haynes.	Wheat, probably 3 bushels per acre less than last year. Oats very much injured by grasshoppers. Other grains about an average crop. Not more than one-half crop of apples; no peaches or cherries; few pears or quinces; about two thirds crop of hay.	Corn, rather better yield than the last two years.
Medina W. P. Clark.	Wheat, the yield per acre generally greater, except on winter-killed wheat. Corn only an average crop. Other grains injured. No peaches; few apples; smaller fruits abundant. Grass and hay, a fair crop.	Corn was injured by worms in spring and summer. Other grains, all more or less injured by the army worm.
Morgan..... J. Davis.	Wheat better than last year, tho' the crop for this section is quite light. Corn, pretty fair crop; about half as much as last year. Oats not so abundant as last year. Buckwheat, a good crop. Little rye and barley sown. Fruit none, or next to none, except blackberries. Half as much grass and hay as last year.	The weevil has been a very great scourge in this county. Our farmers recently have been sowing the weevil-proof wheat, which has succeeded well; the amount sown has been limited. Last year's corn crop was more than an average; pretty fair crop of oats; only a tolerable crop of rye and barley. We had an abundant fruit crop last year; this year only blackberries.

TABLE XI.—GENERAL CONDITION OF AGRICULTURE IN 1861—Continued.

COUNTY.	GRAIN CROPS, ETC.	REMARKS.
Muskingum..... C Springer.	Wheat not so good this year as last. The corn crop is very light. Oats middling; hay scarce. Pastures, the latter part of summer, scorched with drouth. Every variety of cultivated fruit was a total failure this year; only wild grapes and blackberries in abundance. Sorghum has received much attention this year; more has been raised than ever before.	The weevil-proof wheat seems to do best, and commands the highest price. Many years ago, no variety was so remunerative as the red bearded wheat; that failed, and gave place to Mediterranean, which is now yielding to weevil-proof. The light corn crop is owing to unusual drouth in this vicinity. The spring was extremely wet, and corn could not be planted early, and but for the favorable autumn, would have been injured by frost; but is maturing fairly. It is scarce; price, 30c. Oats, price 20c to 25c. Last year we had the most abundant crop of every kind of fruit. A small peach orchard was saved by one of my neighbors, by kindling chip fires the night of the fatal frost. This season indicates a new era in the sorghum culture. Many farmers have mills and evaporators. One person has made 700 gallons this year. The rise of molasses in consequence of the war tariff, has fixed the public determination to take hold of this subject in earnest.
Noble.... W. H. Frazier.	Wheat good. Corn not so good as last year. Oats an average; buckwheat the same — little raised; rye and barley, little raised. Fruit all killed, except small fruits. Hay and grass, an average.	Wheat, four times the amount raised. More corn planted, and about the same amount produced. Oats, three-fourths the amount to the acre. Currants, gooseberries and grapes were a full yield, but are not much cultivated.
Ottawa..... G. B. Smith.	Wheat an average. Corn, average. Other grain, average. Fruit, average. Grass or hay, average.	I have inquired considerably, and give these answers as the most correct. The past season was not remarkable for anything. A dry time in June stunted vegetation some.
Pickaway..... P. O. Smith.	Wheat will average 10 bushels per acre. Corn, two thirds of a crop; average 30 bush. per acre. Other grain about the usual quantity. Little fruit. An average crop of grass and hay. About half the quantity of broom corn in the ground of last year.	This county does not raise enough of other kinds of grain to furnish any statistics. Fruit was almost wholly destroyed by the heavy frost of May 8th.
Sandusky..... L. Q. Rawson.	Wheat: the crop in this county has been much less than that of '59 or '60. Corn, more acres grown; a larger yield than for the two preceding years. Oats the crop is less than either '59 or '60. Sorghum, the crop is said to be good this year. The fruit crop this year is far less than an average one. Hay crop, about two thirds of that of '59 or '60. Pasture for the entire season has been better than usual.	The average yield of wheat has been about two-thirds of said previous years, yet we had more acres sown, which adds to the gross amount of the crop. The corn is ripened good. Oats, about three-fourths of an average yield. Fruit was injured by late spring frosts. The hay crop was injured by drouth in May and June. The value of hay and pasture crop together is about an average.

TABLE XI.—GENERAL CONDITION OF AGRICULTURE IN 1861—Continued.

COUNTY.	GRAIN CROPS, ETC.	REMARKS.
Stark..... J. S. Kelly.	Wheat, two-thirds of an average. Corn, not quite an average. Other grains, about average. Average crops of both grass and hay.	Much ches in wheat this year. Corn ripened well. Clover seed did not mature well. Fruit a failure, except grapes and small fruits, of which there was a full average.
Warren..... A. H. Dunlevy.	Wheat falls short of the crop of 1860, about one-third. Of corn, there is a deficiency from the crop of 1860, of about one fourth of yield to the acre. Barley was equal to 1860; so of oats, rye, potatoes, and grasses. The peach crop was better than for several years. Almost a failure of apples; of small fruits, abundance.	Of wheat, the grain is better, and will make a larger amount of flour to the bushel. The season was too wet to produce good corn. The produce of the peach orchards in Warren have been estimated from 110,000 to 150,000 bushels, averaging about \$2 per bush. The year has been remarkable for rain, from January to October 1st.
Wayne..... Jacob Ihrig.	Wheat: our crop is much less than last year; not more than 8 bush. per acre. Of oats, the average yield may be 25 bush. per acre. Corn crop not more than half. Hay, half a crop. Fruit scarce; some apples and cherries.	Our wheat crop will bear no comparison to the last year's crop. Oats, much damaged by the army worm. Corn was injured by the drouth. The frosts in May were destructive to hay, pasture, and all kinds of fruits. May 2d, a hard frost; June, July and August dry; 11 weeks without rain. Hay, 1 ton to the acre.
Wyandot..... J. D. Sears.	Wheat crop one-third less to the acre than last year; the grain is of good quality. Corn, one-fifth less; well ripened, and better than last year. Oats, one-half crop. Little rye, barley or buckwheat sown here. Apples, pears and peaches few; of small fruits, a fair supply. Hay somewhat lighter than last year, but of good quality.	Wheat injured by excessive spring rains, and corn by summer drouth. The buckwheat crop is lighter than last year. Larger fruits were nearly all killed by spring frosts, and the failure has been more general than for many years. Hay was put up in good order, and taking quality and quantity together into the account, I think the difference is very slight.
Belmont..... J. Nieswanger.	The wheat crop for 1861 very good, and a full average for this county. Corn better than the ten last crops, by 30 per cent. Oats less than an average; not so good in quality as the crop of 1860. Barley, yield for 1861 equal to 1860 in quantity, but inferior in weight of grain. Rye, not much raised in the county of late; the crop of 1861 is good; a full average. The fruit crop is an entire failure in eastern Ohio, except grapes, which have been better than for five preceding years. Grass and hay, scarce an average crop.	Wheat greatly superior in quality to the two preceding years; the yield 20 per cent. better than the crop of 1860, and 50 per cent. better than the crop of 1859; not affected by weevil or fly. Corn was fully matured before the setting in of frost, thus lessening the per cent. of inferior corn; will average 48 bushels, worth 33c per bushel. Oats affected by June drouth; the late sowing did better, owing to frequent summer rains; there is a large surplus in the county, worth 20c to 25c per bush. Barley was injured by June drouth; superior in quality and quantity to '59, by 50 per cent. Rye is principally raised for horse feed. No peaches, and not more than 200 barrels of apples gathered in the county. The grape culture is receiving much attention; the demand has increased 40 per cent. over the two preceding years. Grass and hay much affected by June drouth, and though the aftergrowth was good, it did not meet the expectations of the farmers when cut.

TABLE XI.—GENERAL CONDITION OF AGRICULTURE IN 1861—Continued.

COUNTY.	GRAIN CROPS, ETC.	REMARKS.
Jefferson Roswell Marsh.	Wheat crop above an average; the best for several years. The corn crop is above an average, I think 10 per cent. Of rye and barley, we sow little. Oats, a light crop. Potatoes light. Very little fruit of any kind, except grapes. Grass and hay light, owing to the dry weather of May and June; the after-feed has been very good.	The quantity of wheat sown was not large. There is a large crop of corn planted; it is rather backward, but the growth is heavy. We have had no frost yet. Oats thin and short in the straw. We had but five inches of rain in May and June, and that fell in frequent small showers. The same weather is not favorable for corn and oats; I have rarely seen a good crop of both in the same district. Potatoes are light, for the same reason that cut short the oats. On the 20th of April, the thermometer was at 28 deg.; everything in blossom, or which had passed beyond, with few exceptions, was killed. Grapes, though the young shoots were out two or three inches, were not touched in my grounds, whilst black mulberry leaves, and even the ends of the branches, were killed, close by the grapes. Electricity has more to do with the discriminative action of frost than is admitted in our philosophy.
Butler J. M. Milliken.	Wheat is not over two-thirds of a crop as compared with last year. Corn, the yield is not as good as was expected. Barley ten per cent. less than last year. Rye, about the usual crop. Fruit, except apples, an unusually fine crop. Grass, the crop was good and abundant.	Corn, the average of 1860 was at least 55 bushels per acre; this year not over 45. Apples have been almost an entire failure. The character of the season was apparently very favorable for farm products. Why our corn crops are not as good as last year is a mystery to all farmers.
Preble J. Deniston.	Wheat, about an average crop. Corn rather under an average. Oats fair average crop. Fair crop of peaches. No apples. Of small fruits very good crop. Of grass and hay good average crop. Clover-seed a good yield. Potatoes a good crop. Rye average crop. Barley under the average.	Wheat 20 per cent. less than last year, and about 15 per cent. better than '59. Corn 33 per cent. less than last year, and 20 per cent. better than 1859. Oats 30 per cent. better than 1859. Barley 50 per cent. under an average. At least one-half of the potatoes rotted.
Champaign..... A. F. Vance.	Wheat about half crop. Corn two thirds. Other grain a fair average. Very little fruit. Grass and hay a fair average.	
Jackson..... W. Bennet.	Wheat average crop. Corn half a crop. Fruit of all kinds very scarce. Grass and hay full crop. Oats a large crop.	Wheat of inferior quality, caused by rust and weevil. Corn good. The grains here enumerated are the only kinds raised to any extent in this county.
Meigs C. R. Pomeroy.....	Wheat not so good as last year. Corn not so much raised, and inferior in quality to last year. Other grains about an average with the past two years. Little fruit. Grass and hay good crops—an average with last year.	Fruit was almost entirely cut off by the frost.

TABLE XI.—GENERAL CONDITION OF AGRICULTURE IN 1861—Continued.

COUNTIES.	GRAIN CROPS, ETC.	REMARKS.
Lawrence H. N. Gillett.	Wheat below an average—better than last year ; not as good as the preceding. Corn about an average generally. Oats very good. Buckwheat good. Little rye or barley planted. About one-quarter crop of fruit, of very inferior quality. Grass or hay above an average.	Wheat was injured by fly on uplands, and by rust and army worms on bottoms. Whole fields of corn were destroyed in sections of the county by the large white grub, devouring the root while the plant was young. Fruit injured by late frosts, by the apple worm and other insects, and especially by a new disease, for which I know of no more appropriate name than scab ; portions of the surface of the apple becoming coated with a hard, black crust or scab.

TABLE XII.—OF THE VALUES OF REAL AND PERSONAL PROPERTY, WITH THE TOTAL AMOUNT OF TAXES, AND THE AMOUNT OF WAR TAX, LEVIED TO JULY 1, 1861.

COUNTIES.	Personal Property.	Total Tax.	War Tax.
Adams	\$1,743,630	\$56,734 00 0	\$4,736 00 0
Allen	1,121,843	51,914 51 0	2,709 86 1
Ashland	2,066,393	82,743 00 0	2,860 00 0
Ashtabula	2,537,716	98,071 00 0	7,874 00 0
Athens	1,335,196	63,560 45 3	1,360 16 0
Auglaize	989,255	52,815 00 0	1,381 00 0
Belmont	3,552,693	123,145 35 5	10,343 11 1
Brown	2,869,412	113,946 81 8	3,463 32 7
Butler	5,446,168	228,806 59 0	6,678 12 2
Carroll	1,375,867	57,152 17 3	2,291 03 4
Champaign	3,034,164	Not known.	6,000 00 0
Clark	4,740,341	161,192 93 2	8,542 57 8
Clermont	3,346,120	128,680 49 7	9,041 07 0
Clinton	2,621,411	102,386 65 2	1,200 00 0
Columbiana	3,214,184	114,822 06 8	4,084 68 0
Coshocton	2,067,078	102,834 76 0	3,043 99 0
Crawford	2,485,853	96,937 26 1	4,500 05 3
Cuyahoga	6,223,146	506,570 93 6	10,710 85 1
Darke	2,414,315	101,170 84 9	3,139 97 3
Defiance	753,923	43,018 72 0	903 71 0
Delaware	2,507,406	Not returned.	4,474 00 0
Erie	1,940,803	102,065 43 0	3,803 97 0
Fairfield	2,955,410	Not ascertained.	Dup. not comp.
Fayette	2,407,535	97,259 77 0	4,615 04 4
Franklin	5,992,456	299,216 52 0	9,421 91 0
Fulton	485,047	35,879 88 1	1,663 59 4
Gallia	1,480,542	61,229 33 0	2,226 18 0
Geauga	1,662,922	57,318 15 2	2,424 52 4
Greene	4,321,485	144,683 43 3	5,499 17 2
Guernsey	1,620,615	76,918 33 9	1,778 59 3
Hamilton	28,017,135	1,937,379 00 0	39,119 00 0
Hancock	1,830,778	89,464 16 4	2,374 48 0
Hardin	776,942	46,661 72 0	1,346 84 0
Harrison	2,412,764	94,585 49 4	2,702 00 0
Henry	320,267	26,624 00 0	1,049 00 0
Highland	3,359,114	117,788 00 0	3,833 00 0
Hocking	855,471	38,734 00 0	600 00 0
Holmes	1,578,423	64,165 22 7	2,343 92 5
Huron	2,676,150	111,299 36 4	9,198 84 0
Jackson	982,036	44,425 00 0	1,188 00 0
Jefferson	2,653,760	120,382 22 0	3,369 28 8
Knox	2,384,675	109,519 79 2	3,787 76 4
Lake	1,827,192	61,413 00 0	2,816 00 0
Lawrence	1,967,991	60,643 27 0	1,690 16 0
Licking	4,241,421	182,487 37 4	8,635 95 5
Logan	2,135,847	.....	.....
Lorain	2,863,742	100,075 69 0	4,839 00 0
Lucas	1,808,480	151,220 00 0	3,300 00 0
Madison	2,540,808	73,679 01 2	5,440 61 0
Mahoning	2,533,094	84,217 60 0	8,031 24 0
Marion	2,057,998	34,290 00 0	3,700 00 0
Medina	2,068,744	76,615 58 4	2,727 23 9
Meigs	1,562,151	61,365 48 0	4,637 81 0
Mercer	812,757	45,164 38 9	1,039 44 0
Miami	3,657,885	160,017 64 0	11,550 54 0
Monroe	1,140,735	51,961 00 0	1,589 09 0
Montgomery	1,459,019	332,113 84 7	9,033 99 5
Morgan	1,797,214	65,330 29 2	2,106 27 0
Morrow	2,097,293	67,259 23 0	2,913 77 0
Muskingum	4,696,263	234,253 34 4	6,000 48 0

TABLE XII.—OF THE VALUES OF REAL AND PERSONAL PROPERTY, ETC.—Con.

COUNTIES.	Personal Property.	Total Tax	War Tax.
Noble.....	\$1,076,919	\$54,349 77 9	\$1,744 83 8
Ottawa.....	441,477	30,379 97 3	674 28 4
Paulding.....	184,273	24,176 71 2	408 85 9
Perry.....	1,416,059	55,988 00 0	1,910 00 0
Pickaway.....	3,672,703	144,842 39 0	6,461 35 4
Pike.....	1,430,593	38,790 47 0	1,376 33 0
Portage.....	2,899,750	92,542 42 9	8,112 19 9
Preble.....	3,231,004	116,918 00 4	10,391 11 7
Putnam.....	714,055	60,049 24 7	1,068 01 0
Richland.....	3,335,860	126,893 73 0	10,999 52 0
Ross.....	4,018,132	186,625 26 1	4,400 00 0
Sandusky.....	1,672,458	78,809 00 0	2,164 00 0
Scioto.....	2,398,549	122,614 41 0	2,445 72 0
Seneca.....	2,961,503	111,785 81 0	3,965 51 8
Shelby.....	1,484,752	80,544 55 0	2,044 37 7
Stark.....	4,259,065	176,140 46 0	4,000 00 0
Summit.....	2,912,447	*65,739 72 0	1,106 48 0
Trumbull.....	3,455,437	111,653 81 0	5,713 47 0
Tuscarawas.....	2,477,234	108,060 00 0	3,554 00 0
Union.....	1,269,116	55,875 51 6	1,303 53 0
Van Wert.....	661,761	43,781 47 0	1,144 71 0
Vinton.....	819,508	34,511 11 6	2,380 81 9
Warren.....	4,857,288	140,302 00 0	12,437 00 0
Washington.....	2,285,779	112,673 50 4	4,083 62 5
Wayne.....	3,291,394	122,538 60 0	4,512 97 0
Williams.....	812,346	45,682 00 0	1,049 00 0
Wood.....	836,079	100,170 93 0	1,203 31 0
Wyandot.....	1,361,312	63,256 06 7	2,792 54 2

* Not including State tax.

TABLE XIII.—OF THE NUMBER OF DEEDS AND LEASES AND MORTGAGES RECORDED IN THE YEAR ENDING JULY 1, 1861, AND THE AMOUNT OF MONEY SECURED.

COUNTIES.	Number of deeds and leases.	Number of mortgages and liens	Am't of money secured by mortgage.
Adams.....	592	157	\$109,900 00
Allen.....	561	103	107,754 00
Ashland.....	515	224	.....
Ashtabula.....	1093	372	258,007 59
Athens.....	447	127	81,794 97
Auglaize.....	609	170	99,999 58
Belmont.....	549	265	191,688 00
Brown.....	752	235	225,161 06
Butler.....	1023	521	666,327 00
Carroll.....	338	132	2 611,532 00
Champaign.....	545	248	279,648 00
Clark.....	678	357	297,040 00
Clermont.....	786	316	315,469 00
Clinton.....	550	163	199,045 00
Colembiana.....	911	349	332,663 37
Coshocton.....	456	150	220,490 00
Crawford.....	780	309	225,033 00
Cuyahoga.....	2184	1177	1,733,397 00
Darke.....	823	293	198,105 00
Defiance.....	500	157	93,811 00
Delaware.....	639	309	249,067 00
Erie.....	707	310	242,892 00
Fairfield.....	547	223	183,765 00
Fayette.....	311	112	215,885 64
Franklin.....	1255	673	727,646 00
Fulton.....	542	164	94,800 11
Gallia.....	473	183	99,837 43
Geauga.....	513	167	178,213 00
Greene.....	676	315	591,271 28
Guernsey.....	500	188	134,110 35
Hamilton.....	3970	2246	4,497,691 63
Hancock.....	863	240	206,999 00
Hardin.....	544	183	95,374 00
Harrison.....	381	135	110,531 25
Henry.....	477	120	588,441 42
Highland.....	733	162	123,000 50
Hocking.....	288	188	64,055 00
Holmes.....	335	167	108,610 00
Huron.....	886	406	307,620 00
Jackson.....	309	76	84,724 47
Jefferson.....	448	134	164,881 00
Knox.....	586	272	270,103 00
Lake.....	460	164	156,656 81
Lawrence.....	343	70	70,191 00
Licking.....	895	323	412,972 00
Logan.....	603	233	207,847 00
Lorain.....	1100	410	32,016 75
Lucas.....	1104	360	444,639 55
Madison.....	312	92	145,626 00
Mahoning.....	609	167	204,615 00
Marion.....	623	166	162,999 00
Medina.....	667	288	226,894 00
Meigs.....	671	158	77,740 64
Mercer.....	633	183	81,023 63
Miami.....	706	328	301,500 00
Monroe.....	415	206	93,449 60
Montgomery.....	1291	683	756,200 44
Morgan.....	425	128	78,455 00

TABLE XIII.—Continued.

COUNTIES.	Number of deeds and leases.	Number of mortgages and liens.	Am't of money secured by mortgage.
Morrow.....	507	196	\$168,790 00
Muskingum.....	830	330	278,934 61
Noble.....	575	106	82,120 00
Ottawa.....	382	79	98,789 24
Paulding.....	388	67	24,401 44
Perry.....	385	149	127,135 00
Pickaway.....	.....	150	252,441 71
Pike.....	367	75	31,363 32
Portage.....	684	263	237,000 64
Preble.....	572	216	264,460 84
Putnam.....	640	155	92,490 00
Richland.....	700	308	257,842 96
Ross.....	652	278	318,807 14
Sandusky.....	887	40	306,893 58
Scioto.....	515	176	215,461 79
Seneca.....	784	361	334,212 03
Shelby.....	492	213	128,046 45
Stark.....	827	542	3,053,281 45
Summit.....	742	250	306,082 80
Trumbull.....	254	263	284,185 00
Tuscarawas.....	756	289	246,061 00
Union ..	527	169	151,828 02
Van Wert.....	419	155	72,696 40
Vinton.....	286	92	36,800 00
Warren.....	722	373	432,752 77
Washington.....	465	200	24,500 00
Wayne.....	596	258	2,432 02
Williams.....	723	195	96,676 43
Wood.....	893	278	164,373 00
Wyandot.....	668	283	169,800 00
	60,566	23,296	\$29,634,967 00

TABLE XIV.—OF THE NUMBER OF SUITS AND JUDGMENTS ENTERED IN THE COURTS OF COMMON PLEAS, FOR EACH OF TWO YEARS ENDING JULY 1, 1860 AND 1861.

COUNTIES.	Suits, 1860—1861	Judgments, 1860—1861.	Suits, 1859—1860	Judgments, 1859—1860.
Adams	62	44	120	65
Allen	156	144	215	263
Ashland	321	100	164	64
Ashtabula	310	397	347	348
Athens	211	148	333	180
Auglaize	101	114	139	116
Belmont	221	109	470	442
Brown	275	180	290	217
Butler	437	541	451	206
Carroll	90	50	145	41
Champaign	254	156	300	146
Clark	258	153	243	124
Clermont	210	150	233	151
Clinton	198	138	...	103
Columbiana	297	148	361	332
Coshocton	210	123	169	78
Crawford	252	229	275	162
Cuyahoga	888	743	1,257	1,222
Darke	198	158	211	215
Defiance	33	74	73	86
Delaware	180	117	190	135
Erie	201	237	177	340
Fairfield	330	340	326	297
Fayette	188	120	200	174
Franklin	758	690	878	537
Fulton	79	51	102	66
Gallia	195	133	233	205
Geauga	105	119	126	132
Greene	261	172	253	220
Guernsey	244	266	327	264
Hamilton	3,278	3,825	3,309	2,927
Hancock	180	72	122	93
Hardin	110	104	165	169
Harrison	147	118	152	152
Herry	83	144	117	59
Highland	142	73	195	128
Hocking	116	142	209	204
Holmes	87	89	92	31
Huron	198	122	225	219
Jackson	253	182	340	233
Jefferson	227	131	327	137
Knox	304	372	251	274
Lake	245	116	115	69
Lawrence	189	119	199	111
Licking	604	457	351	329
Logan	164	96	210	174
Lorain	186	172	218	212
Lucas	490	631	618	775
Madison	155	88	214	123
Mahoning	190	97	231	103
Marion	282	75	190	182
Medina	90	95	142	83
Meigs	175	105	199	92
Mercer	110	59	90	75
Miami	188	273	286	278
Monroe	174	236	...	182
Montgomery	560	472	626	325
Morgan	202	195	161	162

NUMBER OF SUITS AND JUDGMENTS—Continued.

COUNTIES	Suits, 1860—1861	Judgments, 1860—1861	Suits, 1859—1860	Judgments, 1859—1860
Morrow	173	83	148	65
Muskingum	347	353	448	537
Noble	150	140	213	71
Ottawa	119	68	60	59
Paulding	109	24	40	23
Perry	101	105	207	139
Pickaway	320	271	392	216
Pike	96	61	100	78
Portage	300	160	202	...
Preble	169	130	183	269
Putnam	58	44	106	89
Richland	326	343	310	183
Ross	222	233	236	173
Sandusky	155	135	148	70
Scioto	270	187	224	275
Seneca	185	186	230	147
Shelby	96	55	157	162
Stark	377	235	407	329
Summit	182	236	197	137
Trumbull	316	135	308	155
Tuscarawas	185	80	280	104
Union	124	101	200	183
Van Wert	82	35	148	60
Vinton	167	161	229	141
Warren	245	135	677	104
Washington	358	190	603	351
Wayne	225	185	240	252
Williams	78	36	136	79
Wood	215	150	204	193
Wyandot	140	156	157	172

TABLE XV.—OF CRIMES: DISTINGUISHING THE CLASSES OF CRIMES INDICTED, AND THE NUMBER OF CONVICTIONS IN THE SEVERAL COUNTIES OF OHIO, FOR THE YEAR ENDING JULY 1, 1861.

COUNTIES.	No. of Indictments.	Against Person.	Against Property.	Statute Offenses.	No. of Convictions.
Adams	3	1	1	1	1
Allen	15	2	3	10	17
Ashland	25	3	2	20	9
Ashtabula	23	4	12	7	12
Athens	38	14	3	21	12
Auglaize	8	4	3	1	7
Belmont	29	12	10	7	21
Brown	5	1	4	—	1
Butler	63	23	17	23	6
Carroll	4	3	—	1	2
Champaign	23	5	3	15	10
Clark	67	10	11	46	64
Clermont	30	13	9	8	19
Clinton	43	8	6	29	25
Columbiana	44	5	6	33	26
Coshocton	95	26	—	69	70
Crawford	29	8	13	8	8
Cuyahoga	74	11	40	23	52
Darke	2	1	1	—	—
Defiance	9	2	6	1	4
Delaware	36	6	3	27	19
Erie	10	4	3	3	3
Fairfield	28	7	9	12	8
Fayette	38	11	2	25	24
Franklin	46	not specified	—	—	20
Fulton	27	4	6	17	5
Gallia	29	16	9	4	13
Geauga	10	2	5	3	4
Greene	83	5	21	57	77
Guernsey	83	7	7	69	46
Hamilton	354	125	110	119	120
Hancock	60	13	5	42	9
Hardin	7	3	3	1	2
Harrison	29	8	—	21	8
Henry	12	3	1	8	6
Highland	29	6	7	16	11
Hooking	10	3	7	—	6
Holmes	7	1	2	4	—
Huron	32	9	12	11	4
Jackson	19	10	3	6	9
Jefferson	25	9	5	11	13
Knox	20	12	2	6	15
Lake	15	4	9	2	—
Lawrence	18	6	3	9	9
Licking	48	22	11	15	27
Logan	40	10	4	26	*14
Lorain	40	7	14	19	26
Lucas	37	5	25	7	20
Madison	19	6	—	13	6
Mahoning	31	4	6	21	13
Marion	36	12	2	22	24
Medina	14	4	3	7	9
Meigs	49	14	7	27	24
Mercer	7	—	1	6	1

TABLE XV.—Continued.

COUNTIES.	No. of Indictments.	Against Person.	Against Property.	Statute Offenses.	No. of Convictions.
Miami	22	5	8	9	16
Monroe	11	4	3	4	5
Montgomery	28	9	9	10	9
Morgan	37	12	3	22	26
Morrow	13	6	—	7	1
Muskingum	60	13	16	31	40
Noble	61	10	—	51	18
Ottawa	8	4	2	2	5
Paulding	20	6	—	14	8
Perry	16	4	3	9	4
Pickaway	15	2	10	3	14
Pike	12	2	5	5	9
Portage	20	3	11	6	9
Preble	31	2	9	20	14
Putnam	18	4	0	14	2
Richland	23	1	2	20	10
Ross	16	6	8	2	13
Sandusky	26	not specified		—	11
Scioto	27	15	1	11	15
Seneca	24	9	4	11	16
Shelby	45	5	7	32	11
Stark	42	6	6	30	26
Summit	21	9	7	5	13
Trumbull	34	6	7	21	23
Tuscarawas	40	4	6	29	17
Union	19	5	—	14	22
Van Wert	18	12	1	5	7
Vinton	13	5	3	4	6
Warren	30	10	6	14	6
Washington	40	11	10	19	23
Wayne	15	2	3	10	8
Williams	35	10	3	21	8
Wood	15	8	0	7	3
Wyandot	3	1	2	1	1

* 4 child-stealing.

TABLE XVI.—OF NATURALIZATIONS IN THE SEVERAL COUNTIES OF OHIO,
SHOWING THE NUMBER NATURALIZED IN THE COURTS OF COMMON PLEAS
FOR THE YEAR ENDING JULY 1, 1861.

COUNTIES.	England, Wales and Scotland.	Ireland.	Germany.	Other countries.	Total.
Adams		3			3
Allen					
Ashland					
Ashtabula					
Athens					
Auglaize					
Belmont	1	1	2		4
Brown					
Butler		5	15	3	23
Carroll					
Champaign					
Clark	12	49	44		105
Clermont					
Clinton	2	12	4	1	19
Columbiana					
Coshocton					
Crawford					
Cuyahoga	47	39	71	18	175
Darke		7	8	2	77
Defiance			1		1
Delaware	1		1		2
Erie	2	6	10	2	20
Fairfield	1	2	28	8	39
Fayette			1		1
Franklin	6	9	10	1	26
Fulton					
Gallia					
Geauga					
Greene	3	34	4	2	43
Guernsey		5			5
Hamilton	72	175	1,266	128	1,640
Hancock					
Hardin					
Harrison					
Henry					
Highland					
Hocking					
Holmes					
Huron	1	1	1	1	4
Jackson					
Jefferson	1	10		1	12
Knox				1	1
Lake	21			1	22
Lawrence		6	3		9
Licking			1		1
Logan			2		2
Lorain					
Lucas	1	1	5		7
Madison					
Mahoning					
Marion					
Medina	10		6		16
Meigs		6			6
Mercer					
Miami					

TABLE XVI.—NATURALIZATIONS IN COURTS OF COMMON PLEAS—Continued.

COUNTIES.	England, Wales and Scotland.	Ireland.	Germany.	Other countries.	Total.
Monroe			3	3	6
Montgomery		1	2		3
Morgan					
Morrow					
Muskingum	2	1		2	5
Noble					
Ottawa			4		4
Paulding		3		1	4
Perry					
Pickaway					
Pike					
Portage					
Preble			1		1
Putnam					2
Richland	1	1	2		4
Ross					
Sandusky					
Scioto		2	3	2	7
Seneca					
Shelby					*7
Stark					
Summit					
Trumbull	2	1			3
Tuscarawas			2		2
Union					
Van Wert					
Vinton					
Warren		6	2		8
Washington	3	4	2		9
Wayne					
Williams			4		4
Wood				1	1
Wyandot					

* Nativity not specified.

TABLE XVII.—OF NATURALIZATIONS IN THE PROBATE COURTS OF OHIO,
FOR THE YEAR ENDING JULY 1, 1861.

COUNTIES.	England, Wales and Scotland.	Ireland.	Germany.	Other Countries.	Total.
Adams					63
Allen	8	13	28	14	34
Ashland	14	4	14	2	35
Ashtabula	22	7	6		*12
Athens					68
Auglaize	1	4	58	5	65
Belmont	7	28	30		93
Brown	45		30	18	354
Butler	20	94	217	23	6
Carroll		4	2		45
Champaign		39	6		4
Clark		2	2		*148
Clermont					3
Clinton		3			55
Columbiana					51
Coshoc'on	9	8	16	18	125
Crawford	33		82	10	503
Cuyahoga	39		435	29	34
Darke		6	25	3	72
Defiance	4	9	45	14	38
Delaware	12	10	13	3	224
Erie	18	36	161	9	15
Fairfield	3	2	6	4	16
Fayette		10	6		407
Franklin	130	67	190	20	61
Fulton	6	2	20	33	31
Gallia	20	5	4	2	19
Geauga	8	5	6		37
Greene	3	28	4	2	17
Guernsey	3	12		2	2014
Hamilton	97	561	1209	147	*55
Hancock					42
Hardin	7	9	17	9	8
Harrison	2	4		2	59
Henry	10	6	38	5	50
Highland	5	31	5	9	27
Hocking	5	5	15	2	50
Holmes	1	3	25	21	170
Huron	41	19	95	15	109
Jackson	43	40	26		48
Jefferson	8	25	14	1	45
Knox	20	15	6	4	50
Lake	43		5	2	110
Lawrence	26	18	66		80
Licking	37	23	13	7	*24
Logan					130
Lorain	65	9	54	2	*45
Lucas					50
Madison	2	44	4		98
Mahoning	39	22	30	7	56
Marion	6	11	32	7	23
Medina	14		9		109
Meigs	56	8	45		38
Mercer	3		32	3	85
Miami	6	24	48	7	99
Monroe	1	5	47	46	384
Montgomery	17	94	252	19	

TABLE XVII.—OF NATURALIZATIONS IN THE PROBATE COURTS—Continued.

COUNTIES.	England, Wales and Scotland.	Ireland.	Germany.	Other Countries.	Total.
Morgan.....					6
Morrow.....	3	4	7		14
Muskingum.....	17	36	59	8	120
Noble.....		2	5		7
Ottawa.....					*64
Paulding.....	2		1	1	4
Perry.....		8	2	1	11
Pickaway.....	53		29	1	83
Pike.....	1		39	1	41
Portage.....	32		17	1	50
Preble.....	1	35	27	1	64
Putnam.....	2		19		21
Richland.....	25	15	60	3	103
Ross.....	6	37	78	1	122
Sandusky.....	9	16	74	11	110
Scioto.....	18	44	180	39	281
Seneca.....	6	11	136	17	170
Shelby.....	2	22	37	22	83
Stark.....	32		81	62	175
Summit.....	42	37	58	11	148
Trumbull.....	75	45	48	7	175
Tuscarawas.....	10	3	30	65	118
Union.....					*16
Van Wert.....					*20
Vinton.....					*24
Warren.....	3	19	19		41
Washington.....	8	39	83		130
Wayne.....	14	14	40	37	95
Williams.....	3	1	17	14	35
Wood.....		3	2	1	6
Wyandot.....					*15

*Nativity not specified.

TABLE XVIII.—STATISTICS OF PROBATE COURTS, WILLS, ADMINISTRATIONS AND MARRIAGES, FOR THE YEAR ENDING JULY 1, 1861.

COUNTIES.	No. of wills.	No. of administrations.	NUMBER OF MARRIAGES.		
			By license.	By banns.	Total.
Adams.....	16	12	203	4	207
Allen.....	9	16	244	5	249
Ashland.....	18	29	178	.....	178
Ashtabula.....	37	70	218	.....	218
Athens.....	13	13	183	.....	183
Auglaize.....	15	28	150	14	164
Belmont.....	40	32	240	.....	240
Brown.....	18	14	259	.....	259
Butler.....	23	91	402	.....	402
Carroll.....	21	18	125	.....	125
Champaign.....	20	12	202	.....	202
Clark.....	25	34	230	.....	230
Clermont.....	23	47	292	4	296
Clinton.....	19	25	163	.....	163
Columbiana.....	33	36	244	.....	244
Coshocton.....	11	22	214	.....	214
Crawford.....	13	52	222	.....	222
Cuyahoga.....	36	64	710	.....	710
Darke.....	15	34	254	1	255
Defiance.....	6	13	118	2	120
Delaware.....	22	18	211	.....	211
Erie.....	18	31	230	5	235
Fairfield.....	21	37	265	2	267
Fayette.....	6	17	135	.....	135
Franklin.....	38	50	455	10	465
Fulton.....	5	7	88	1	89
Gallia.....	26	20	200	.....	200
Geauga.....	20	25	136	.....	136
Greene.....	26	26	231	1	232
Guernsey.....	26	20	223	.....	223
Hamilton.....	116	286	2369	576	2945
Hancock.....	10	27	260	.....	260
Hardin.....	5	23	134	.....	134
Harrison.....	25	21	146	.....	146
Henry.....	3	11	85	.....	85
Highland.....	19	33	243	.....	243
Hocking.....	13	18	126	.....	126
Holmes.....	12	23	165	.....	165
Huron.....	22	37	283	2	285
Jackson.....	9	8	159	.....	159
Jefferson.....	24	22	224	.....	224
Knox.....	21	42	266	.....	266
Lake.....	13	14	161	.....	161
Lawrence.....	7	29	219	.....	219
Licking.....	27	39	359	.....	359
Logan.....	21	38	205	.....	205
Lorain.....	31	24	290	.....	290
Lucas.....	11	54	193	29	222
Madison.....	16	13	135	.....	135
Mahoning.....	29	21	175	.....	175
Marion.....	10	17	166	.....	166
Medina.....	27	53	210	.....	210
Meigs.....	13	17	272	5	277
Mercer.....	12	19	100	45	145
Miami.....	36	31	292	.....	292
Monroe.....	20	26	259	.....	259
Montgomery.....	40	44	514	4	518

TABLE XVIII.—Continued.

COUNTIES.	No. of wills.	No. of admin- istrations.	NUMBER OF MARRIAGES.		
			By license.	By bands.	Total.
Morgan.....	19	29	151	.....	151
Morrow.....	11	15	189	.....	189
Muskingum.....	46	65	389	2	391
Noble.....	7	14	184	.....	184
Ottawa.....	7	5	64	61	125
Paulding.....	2	5	28	.....	28
Perry.....	20	12	168	.....	168
Pickaway.....	15	37	231	.....	231
Pike.....	5	14	141	.....	141
Portage.....	25	26	197	.....	197
Preble.....	16	30	192	.....	192
Putnam.....	9	27	62	15	77
Richland.....	23	44	251	.....	251
Ross.....	17	50	321	.....	321
Sandusky.....	12	15	246	.....	246
Soioto.....	13	36	234	.....	234
Seneca.....	23	21	298	22	320
Shelby.....	10	23	156	.....	156
Stark.....	22	45	374	13	387
Summit.....	34	73	273	.....	273
Trumbull.....	34	32	251	.....	251
Tuscarawas.....	27	40	296	.....	296
Union.....	12	10	154	.....	1 4
Van Wert.....	4	19	100	1	101
Vinton.....	2	9	101	98	199
Warren.....	26	47	230	.....	230
Washington.....	26	28	293	.....	293
Wayne.....	38	53	249	3	272
Williams.....	15	19	130	.....	130
Wood.....	10	20	162	.....	162
Wyandot.....	7	19	160	.....	160

TABLE XIX.—CORONERS' REPORTS OF VIOLENT DEATHS, BY MURDER, SUICIDE, OR CASULTIES, DURING THE YEAR ENDING JULY 1, 1861.

COUNTIES.	Murder.	Suicide.	Casualties.	Total.	Number of Inquests.	Remarks.
Adams	1	1	3	5	3	
Allen						
Ashland						
Ashtabula		4	7	11	4	5 by railroad.
Athens			2	2		Children drowned.
Auglaize						
Belmont			7		7	3 drowned ; 2 railroad ; 1 found dead.
Brown						
Butler	2	1	7	10	10	3 drowned ; 2 railroad.
Carroll		1			1	
Champaign						
Clark						
Clermont	1	2	6	9	9	2 drowned.
Clinton		3			4	
Columbiana	2	1	8	11	5	7 drowning ; 1 railroad.
Coshocton	1			1		
Crawford	1	1		2	2	
Cuyahoga	6	7	25	38	30	3 infanticide ; 6 intoxicated ; 8 railroad.
Darke			1		1	
Defiance			2	2	1	1 drowned.
Delaware			12		6	3 intoxication.
Erie			3	4	4	2 "
Fairfield			2		1	1 drowned.
Fayette						
Franklin						No return.
Fulton						
Gallia		1	2	3	3	1 hung himself while intoxicated.
Geauga		2	2	4	4	2 cutting throat ; 1 drowned.
Greene						
Guernsey						None reported to Coroner.
Hamilton	27	36	116	179	179	19 by intoxication ; 43 drowned.
Hancock			4		1	
Hardin		1	3	4		Suicide by intoxication.
Harrison						
Henry			5			3 drowning.
Highland	1	1	1		3	1 infanticide ; 1 hanging ; 1 railroad.
Hocking						
Holmes						
Huron		2	2	4	3	2 suicide by intoxication.
Jackson	2	1	1	4	4	
Jefferson			7	7	6	5 drowning ; 2 railroad.
Knox		1	6	7	1	5 by horses ; 1 drowning.
Lake	1	2	4	7	3	1 infanticide ; 2 railroad.
Lawrence	1		6	7	5	1 infanticide ; 4 drowned.
Licking		2	5	7	7	1 hanging ; 1 intoxicated ; 1 railroad.
Logan	1	1	2	4	2	2 drowned.
Lorain		2	4	6	2	2 hanging ; 1 drowned ; 1 railroad.
Lucas			9	9	14	4 drowned ; 1 railroad.
Madison						
Mahoning			1	1	1	
Marion						
Medina		1		1	1	Hanging.
Meigs				8	8	
Mercer		1	5	6	2	1 intoxication.
Miami	1	1	1	3	3	1 "
Monroe	1	2	1	4	4	1 drowning.
Montgomery	6	7	2	15	15	4 infanticide ; 3 intoxication.
Morgan			1	1		

TABLE XIX.—CORONERS' REPORTS OF VIOLENT DEATHS—Continued.

COUNTIES.	Murder.	Suicide.	Casualties.	Total.	Number of Inquests.	Remarks.
Morrow .....	.....	.....	.....	.....	.....
Muskingum	1	2	4	7	7	1 intoxication ; 1 railroad ; 2 drown.
Noble .....	.....	.....	2	2	2	
Ottawa .....	.....	.....	5	5	4	
Paulding .....	.....	.....	.....	.....	.....
Perry .....	.....	1	2	.....	3	1 intoxication.
Pickaway .....	.....	.....	.....	.....	.....
Pike .....	.....	.....	.....	.....	.....
Portage .....	.....	.....	.....	.....	.....
Preble .....	.....	.....	.....	.....	.....
Putnam	1	.....	6	7	6	
Richland .....	.....	1	3	4	2	2 railroad.
Ross	1	1	6	8	8	1 intoxication ; 1 railroad ; 2 drowned.
Sandusky .....	.....	1	2	3	2	
Scioto	1	1	8	9	9	1 intoxication ; 6 drowned.
Seneca .....	.....	.....	.....	.....	.....	No report to Com.
Shelby .....	.....	.....	.....	.....	.....	" "
Stark	1	1	4	6	6	4 by railroad.
Summit	1	.....	2	3	3	
Trumbull .....	.....	4	7	11	6	1 intoxication.
Tuscarawas .....	.....	4	9	13	4	3 by drowning ; 3 by drunkenness.
Union	1	.....	.....	1	1	
Van Wert .....	.....	.....	.....	.....	.....	No report to Com.
Vinton .....	.....	.....	.....	.....	.....	" "
Warren .....	.....	.....	3	6	6	
Washington .....	.....	5	6	6	6	4 drowned while intoxicated.
Wayne .....	.....	.....	.....	.....	.....	None reported to Coroner.
Williams	2	.....	1	.....	2	2 infanticide.
Wood	1	.....	.....	1	.....
Wyandot	1	.....	3	3	3	

TABLE XX.—NUMBER AND VALUE OF NEW STRUCTURES ERECTED IN OHIO DURING THE YEAR ENDING JULY 1, 1861.

COUNTIES.	Number.	Value.	COUNTIES.	Number.	Value.
Adams.....	72	\$24,156	Logan.....	81	\$23,350
Allen.....	141	43,372	Lorain.....	212	54,160
Ashland.....	129	35,930	Lucas.....	156	62,920
Ashtabula.....	66	19,285	Madison.....	51	31,600
Athens.....	26	7,225	Mahoning.....	178	59,224
Auglaize.....	86	26,882	Marion.....	70	20,725
Belmont.....	56	17,025	Medina.....	91	17,315
Brown*.....	309	152,270	Meigs.....	154	38,100
Butler.....	34	9,040	Mercer.....	24	4,260
Carroll.....	83	38,560	Miami.....	143	67,239
Champaign.....	154	79,790	Monroe.....	36	9,831
Clarke.....	34	34,585	Montgomery.....	275	137,240
Clermont.....	63	31,375	Morgan.....	53	10,714
Clinton.....	147	37,506	Morrow.....	108	22,455
Columbiana.....	69	23,850	Muskingum†.....	87	25,550
Coshocton.....	168	52,420	Noble.....	63	11,570
Crawford.....	273	101,034	Ottawa.....	60	16,426
Cuyahoga.....	108	37,323	Paulding.....	16	3,677
Darke.....	73	12,415	Perry.....	52	12,025
Defiance.....	132	36,750	Pickaway†.....	81	32,372
Delaware.....	83	29,480	Pike.....	40	13,460
Erie.....	90	34,220	Portage.....	103	26,820
Fairfield.....	53	23,250	Peeble.....	97	47,825
Fayette.....	205	154,805	Putnam.....	98	27,348
Fulton.....	100	15,697	Richland.....	182	62,845
Gallia.....	75	33,125	Ross.....	43	18,920
Geauga.....	90	13,920	Sandusky.....	152	45,490
Greene.....	187	72,820	Scioto.....	91	31,715
Guernsey.....	40	10,200	Seneca.....	211	67,545
Hamilton.....	1,163	1,431,355	Shelby.....	114	29,205
Hancock.....	170	40,263	Stark.....	156	56,650
Hardin.....	51	14,305	Summit||.....	128	34,748
Harrison.....	38	12,725	Trumbull.....	142	65,234
Henry.....	95	17,795	Tuscarawas.....	86	36,905
Highland.....	99	32,502	Union.....	48	11,100
Hocking.....	23	9,405	Van Wert.....	69	16,200
Holmes.....	80	17,700	Vinton.....	22	5,825
Huron.....	170	42,700	Warren.....	114	51,970
Jackson.....	29	10,540	Washington.....	85	28,340
Jefferson.....	66	25,650	Wayne.....	148	45,918
Knox.....	83	18,712	Williams.....	108	18,205
Lake.....	79	31,793	Wood.....	79	13,310
Lawrence.....	24	9,354	Wyandot.....	86	24,283
Licking.....	122	40,215	Total.....	9,831	\$4,663,026

* None reported to Commissioner.

† Three new structures destroyed; value, \$375.

‡ Three new structures destroyed; value, \$488. || Including new, and rep. to old structures.

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